

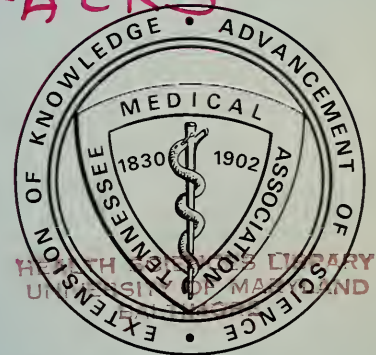
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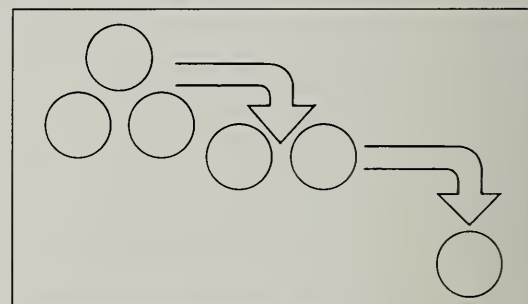
Elimination rates are gradual with Valium and thus provide a compatible adjustment interval for

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*Sellers EM: *Drug Metab Rev* 8(1):5-11, 1978



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DOCTORS: Recommend Clean Water For Your Patients

As you know, our water resources throughout the country are being polluted by chemical and industrial waste. Our waterways, streams, springs, and wells (including artesian wells) are being contaminated with industrial chemicals.

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Indications

Cyclacillin has less *in vitro* activity than other drugs in the ampicillin class and its use should be confined to these indications: Treatment of the following infections:

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Bronchitis and pneumonia caused by *S. pneumoniae* (formerly *D. pneumoniae*)
Otitis media caused by *S. pneumoniae* (formerly *D. pneumoniae*) and *H. influenzae*
Acute exacerbation of chronic bronchitis caused by *H. influenzae**

*Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to *H. influenzae*.

SKIN AND SKIN STRUCTURES (integumentary) infections caused by Group A beta-hemolytic streptococci and staphylococci, non-penicillinase producers.

URINARY TRACT INFECTIONS caused by *E. coli* and *P. mirabilis*. (This drug should not be used in any *E. coli* and *P. mirabilis* infections other than urinary tract.)

NOTE: Perform cultures and susceptibility tests initially and during treatment to monitor effectiveness of therapy and susceptibility of bacteria. Therapy may be instituted prior to results of sensitivity testing.

Contraindications Contraindicated in individuals with history of an allergic reaction to penicillins.

Warnings Cyclacillin should only be prescribed for the indications listed herein.

Cyclacillin has less *in vitro* activity than other drugs of the ampicillin class. However, clinical trials demonstrated it is efficacious for recommended indications.

Serious and occasional fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin. Although anaphylaxis is more frequent following parenteral use, it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with history of sensitivity to multiple allergens. There are reports of patients with history of penicillin hypersensitivity reactions who experienced severe hypersensitivity reactions when treated with a cephalosporin. Before penicillin therapy, carefully inquire about previous hypersensitivity reactions to penicillins, cephalosporins and other allergens. If allergic reaction occurs, discontinue drug and initiate appropriate therapy. Serious anaphylactoid reactions require immediate emergency treatment with epinephrine. Oxygen, I.V. steroids, airway management, including intubation, should also be administered as indicated.

Precautions Prolonged use of antibiotics may promote overgrowth of nonsusceptible organisms. If superinfection occurs, take appropriate measures.

PREGNANCY: Pregnancy Category B. Reproduction studies performed in mice and rats at doses up to 10 times the human dose revealed no evidence of impaired fertility or harm to the fetus due to cyclacillin. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, use this drug during pregnancy only if clearly needed.

NURSING MOTHERS: It is not known whether this drug is excreted in human milk. Because many drugs are, exercise caution when cyclacillin is given to a nursing woman.

Adverse Reactions Oral cyclacillin is generally well tolerated. As with other penicillins, untoward sensitivity reactions are likely, particularly in those who previously demonstrated penicillin hypersensitivity or with history of allergy, asthma, hay fever, or urticaria. Adverse reactions reported with cyclacillin: diarrhea (in approximately 1 out of 20 patients treated), nausea and vomiting (in approximately 1 in 50), and skin rash (in approximately 1 in 60). Isolated instances of headache, dizziness, abdominal pain, vaginitis, and urticaria have been reported. (See WARNINGS) Other less frequent adverse reactions which may occur and are reported with other penicillins are anemia, thrombocytopenia, thrombocytopenic purpura, leukopenia, neutropenia and eosinophilia. These reactions are usually reversible on discontinuation of therapy.

As with other semisynthetic penicillins, SGOT elevations have been reported.

As with antibiotic therapy generally, continue treatment at least 48 to 72 hours after patient becomes asymptomatic or until bacterial eradication is evidenced. In Group A beta-hemolytic streptococcal infections, at least 10 days' treatment is recommended to guard against risk of rheumatic fever or glomerulonephritis. In chronic urinary tract infection, frequent bacteriologic and clinical appraisal is necessary during therapy and possibly for several months after. Persistent infection may require treatment for several weeks.

Cyclacillin is not indicated in children under 2 months of age.

Patients with Renal Failure. Cyclacillin may be safely administered to patients with reduced renal function. Due to prolonged serum half-life, patients with various degrees of renal impairment may require change in dosage level (see DOSAGE AND ADMINISTRATION in package insert).

Dosage (Give in equally spaced doses)

INFECTION	ADULTS	CHILDREN*
Respiratory Tract		
Tonsillitis & Pharyngitis	250 mg q.i.d.	body weight < 20 kg (44 lbs) 125 mg q.i.d. body weight > 20 kg (44 lbs) 250 mg q.i.d.
Bronchitis and Pneumonia		
Mild or Moderate Infections	250 mg q.i.d.	50 mg/kg/day q.i.d.
Chronic Infections	500 mg q.i.d.	100 mg/kg/day q.i.d.
Otitis Media	250 mg to 500 mg q.i.d.†	50 to 100 mg/kg/day†
Skin & Skin Structures	250 mg to 500 mg q.i.d.†	50 to 100 mg/kg/day†
Urinary Tract	500 mg q.i.d.	100 mg/kg/day

*Dosage should not result in a dose higher than that for adults.
†depending on severity

The Role of Nurse Practitioners As Family Planning Clinicians In Tennessee

HANI K. ATRASH, M.D.; DAVID T. ALLEN, M.D.;
ROGER W. ROCHAT, M.D.; and LYNNE SMITH, R.N., FPNP

Introduction

The concept of a statewide, publicly subsidized, family planning program was endorsed by Tennessee Department of Public Health in 1967. In 1971, the Tennessee General Assembly passed the Family Planning Act and the state undertook the responsibility to insure that "all medically acceptable contraceptive procedures shall be readily and practicably available to each and every person desirous of the same, regardless of sex, race, age, income, number of children, marital status, citizenship, or motive."¹

In 1972 the Tennessee Statewide Family Plan-

ning Program began employing nurse practitioners to provide family planning services and medical care to patients enrolled in the program. The number of nurse practitioners has been increasing since then so that now, in 1980, there are 54 nurse practitioners providing services in 89 of Tennessee's 95 counties.

To evaluate the role of nurse practitioners as family planning clinicians in Tennessee we sent detailed questionnaires asking about their personal characteristics, background, experience, their responsibilities in dealing with patients, the clinic setting in which they work, and about any changes that had occurred in the family planning program after their employment.

Background

After the 1971 Tennessee Family Planning Act was enacted, the role of the Tennessee Department of Public Health shifted from passive support to direct assistance and coordination of county health department family planning efforts. The number of patients served by the program grew rapidly from 7,000 (5,000 active patients) in 1970 (i.e. before the Family Planning Act was passed) to 105,000 (47,000 active patients) in 1972 and to a maximum of 170,000 (125,000 active patients) in 1975. In 1979, the

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FAMILY PLANNING/Atrash

program was serving 157,000 patients (98,000 active patients) with a budget of \$8.8 million through health department clinics and private providers in around 200 clinics and in all 95 counties. ("Active" patient is defined as one who is enrolled in the program, is on a contraceptive method, and has a return appointment date.)

With this rapidly growing number of patients seeking family planning services, an increasing need for physicians (traditionally providing those services) was felt. Other parts of the country were already employing nurse practitioners in similar situations and in various fields like pediatrics and primary medical care.

The Tennessee Statewide Family Planning Program adopted a policy of employing family planning nurse practitioners. The primary purpose of employing nurse practitioners was to provide quality family planning services in all counties and to all Tennessee residents. In providing care to those patients, nurse practitioners followed a medical protocol and physicians cared for patients when higher levels of medical education, experience, and judgment were needed. After making services available in *all geographic areas*, the program sought to improve patient education and to direct service to teenagers and to women who work and cannot visit clinics during usual office hours; therefore evening clinics were established.

In June 1972 the Tennessee Department of Public Health began to select nurses for training as family planning nurse practitioners. The first two nurses, selected by Knox County Health Department, were sent to the School for Family Planning Nurse Practitioners at the University of Mississippi Medical Center, Jackson, Miss. Later that year, one nurse was sent from McMinn County and one from Cocke County. In the ensuing months, other nurses from various parts of the state were sent to practitioner schools and the concept of the nurse practitioner clinic was implemented statewide. To train a registered nurse to become a family planning nurse practitioner, most programs provide a 12-week course of full-time study consisting of approximately one third didactic and two thirds clinical experience. As summarized by the Emory University training program for family planning nurse practitioners, the course includes "a lecture and clinical course in obstetrical and gynecological clinical methods focusing on family planning. It is designed to

acquaint the student with the techniques, methods and basic principles necessary to take careful histories, perform thorough physical examinations and employ basic laboratory procedures in identifying patients' needs and formulating a plan of care. Students will also participate in seminars which will include psychological needs as well as pathophysiological processes encountered with the patients and their parents. The role of the nurse as a primary health care provider will also be examined."

The practitioners, working with physician-signed medical protocol, were to head a team of nurses, a clerk, and nurse aides. With the exception of the metropolitan areas, these family planning teams would provide additional clinical services in several counties. A ten-page, detailed, model medical protocol was developed by the practitioners and the program's medical advisory board to encompass the basic standards of medical examination and contraceptive management. This protocol was the basis of all the family planning nurse practitioner protocols. It described in detail the steps of (1) evaluating a new or annual-visit family planning patient (history, physical examination, and laboratory tests); (2) managing contraceptive patients (oral contraceptives of various types and compositions; intrauterine device insertion, removal, and management of complications; fitting of diaphragms and teaching patients how to fit them; condoms, spermicidal creams, jellies, and foams; rhythm instructions; and, surgical sterilization counseling); (3) instructing infertility patients, with referrals for infertility workup; (4) managing specific gynecologic and family planning problems (vaginitis, diagnosis and treatment; interpretation of Papanicolaou smear results; anemia, diagnosis and management; venereal warts, diagnosis and treatment; urinary tract infection referrals; pediculosis pubis treatment; genital Herpes II, diagnosis and referral); (5) laboratory procedures (hematocrit indications, Papanicolaou smear indications, wet-smear indications, serology indications, gonorrhea culture indications, pregnancy test indications); and (6) referrals in cases of medical problems, positive serologic tests, positive hemoglobin electrophoresis for sickle-cell disease, positive or suspicious cervical cytology, vaginal infection not responding to stated protocol therapy, urinary tract infection (and albuminuria), anemia not responding to one month of stated protocol therapy, pregnancy-related services, infertility

workup, sterilization services, and social case work not appropriately handled by project personnel.

Initially, the protocols were signed by region/district public health physicians and private physicians who served also as preceptors. The physician preceptor provided frequent over-the-shoulder supervision for the practitioners. *Each practitioner obtained a signed agreement from a private physician in each county in which she worked, to see any patients with complications.*

The nurse practitioner clinic was accepted by the patients and the community with little reservation. As clinic populations increased, the need

for more practitioners was accepted, and each year additional nurses were sent to schools for nurse practitioners. All nurse practitioners in the family planning program have received education in the provision of perinatal care, thereby increasing the scope of total care offered to patients. At the end of 1979, there were 54 nurse practitioners associated with Tennessee's family planning program working in 89 counties.

Methods

We prepared a detailed, five-page questionnaire and sent it to all 54 nurse practitioners in May 1980. The questionnaire had three main sections. The first collected personal characteristics

TABLE 1

NURSE PRACTITIONERS EMPLOYED BY THE TENNESSEE STATEWIDE FAMILY PLANNING PROGRAM ACCORDING TO YEAR AND SCHOOL OF TRAINING AS FAMILY PLANNING NURSE PRACTITIONERS IN TENNESSEE 1972-1980

School	1972	1973	1974	1975	1976	1977	1978	1979	1980	TOTAL
University of Mississippi Medical Center at Jacksonville	1	1	1	1	2	1		1		8
University of Kansas Medical Center at Kansas City		1			1					2
Planned Parenthood Association of New Jersey at Newark		1								1
Emory University Regional Training Center, Atlanta, Georgia			1	1		1	4	1	3	11
Planned Parenthood Association of Wisconsin at Milwaukee			3	1						4
University of Alabama Medical Center at Birmingham			1		2		1			4
Meharry Medical School, Nashville, Tennessee			1		1					2
Vanderbilt University Medical Center, Nashville, Tennessee				1	1			1		3
Luton Maternity Hospital, Luton, England				1						1
University of Florida Medical Center at Jacksonville					1		2			3
University of Tennessee Medical Center at Memphis							1	1		2
Planned Parenthood Association of Texas at Houston								1		1
TOTAL	1	3	7	5	8	2	8	5	3	42

of nurse practitioners (age, race, marital status, contraceptive use, education, previous experiences before training as family planning nurse practitioners, and place and time of training as family planning nurse practitioners). The second section dealt with the types and numbers of patients that nurse practitioners encountered together with the types of examinations, laboratory tests, and treatments that they are allowed to do. The third section collected characteristics of clinics, whether in urban, in rural, or in mixed urban-rural areas, other personnel working in clinics, and whether or not any major changes had taken place in those clinics after the employment of nurse practitioners.

Three weeks after mailing the questionnaire, telephone call follow-ups were made to all those who did not return the questionnaires. The 42 (77.8%) completed questionnaires represented nurse practitioners working in 115 clinics in 69 counties.

Characteristics of Respondents

Three respondents were black and 39 were white. The respondents' ages ranged between 26 and 63 years, with a mean of 37.8 years. Most were married or divorced (90%) and averaged 2.1 children. When asked about personal contraceptive history, 38 respondents had used or were using one or more methods of contraception. Twenty-eight (74%) had used oral contraceptives at some time and 12 (43%) of these reported having had complications (two pregnancies). Twenty-two of the respondents (58%) used diaphragms, and only 2 (9%) reported complications. Sixteen used other contraception methods (condoms, foam, sterilization, hysterectomy, vasectomy, rhythm, etc.).

Nurse practitioners working with the Tennessee Statewide Family Planning Program are graduates of different schools in different years (Table 1). Most recently, the regional training center at Emory University School of Medicine, Atlanta, has been given the task of training family planning nurse practitioners for all family planning programs in the Department of Health, Education, and Welfare, Region IV.

Most nurse practitioners received their basic preparation in nursing in a hospital-based three-year diploma program (76%); 10 (24%) had a baccalaureate degree, and two had a masters degree. Thirteen (31%) nurses graduated from

nursing school before 1960, 12 between 1961 and 1970, and 17 after 1970. The period spent between graduation from nursing school and training as nurse practitioners ranged between 0 and 41 years with an average of 12 years. During this period, nurses had worked in various fields and in different settings (12 worked in private physician clinics, 17 in private hospitals, 35 in health department clinics, and 22 in public hospitals); most of them, however, had worked in the field of public health before their training as family planning nurse practitioners (36 of 42, or 86%).

Nurse Practitioners' Responsibilities

The duties of nurse practitioners are sometimes limited to one clinic, but at times their duties involve working at up to seven clinics in one or more counties. All nurse practitioners (following a protocol) review past history of all patients (patient history; obstetrical and gynecological history, including menstrual, coital, and venereal disease history; contraceptive history; and blood pressure evaluation) and do a full physical examination (eye, ear, neck, throat, thyroid palpation, heart-lung evaluation, breast and axilla examination accompanied by instruction for self-examination, abdomen palpation, extremities inspection, and pelvic examination, including external genitalia, urinary tract, Bartholin and Skene glands, vagina, cervix, bimanual examination, and rectal-vaginal examination). Nurse practitioners also obtain and interpret results of Papanicolaou smears, gonorrhea cultures, vaginal wet-smears and pregnancy tests. They diagnose and treat vaginitis, prescribe oral contraceptives, fit diaphragms, provide condoms, and explain the use of natural family planning methods. Thirty-five nurse practitioners were allowed to insert intrauterine devices (IUDs), and 39 were allowed to remove IUDs. When asked what else they would like to be allowed to do, five said they would like to be allowed to diagnose and treat urinary tract infections and use antibiotics; only one of the seven who were not allowed to insert IUDs asked that she be allowed to do so.

Each nurse practitioner served an average of 66 patients each week; 15 for initial oral contraceptive prescription, 20 for follow-up oral contraceptives, 11 with oral contraceptive-related problems, three for IUD insertion, two for IUD removal, three for IUD-related problems, three for diaphragm fitting or follow-up, and nine

other contraceptive patients. Each month, a nurse practitioner refers an average of 15 patients to a private physician or hospital for diagnosis and/or treatment; those referrals average one for IUD complication, two for oral contraceptive complications, three for abortion counseling, and nine for medical problems.

Clinics Before and After Employment of Nurse Practitioners

Before the nurse practitioners started their work in family planning, almost half of the clinics (47%) were being served by physicians. The rest either were not existent (23 sites) or were served by other nurse practitioners than the respondents (38 sites). Of the 115 clinics served by respondents, 29 (25%) were in urban areas, 22 (19%) were in mixed urban-rural, and 64 (56%) were in rural areas. In 23 clinics (20%) (eight clinics in urban, eight in rural, and seven in mixed areas), nurse practitioners worked directly with physicians, and in 101 clinics (88%) they worked with nurses: almost all clinics (90%) had a nurse's aide and a clerk; only 14 clinics (12%) had a social worker, and only 16 clinics (14%) had a health educator.

Following the utilization of nurse practitioners as family planning clinicians, some major changes occurred in clinics. In 60 clinics (52%), a community-education program or a patient-education program was started. Sixteen evening clinics and 19 clinics for teenagers were also started. Nurse practitioners also reported that after they started working, 23 new clinics were added, and that in 65 clinics (57%) the number of clinic hours was increased.

Discussion

Previous evaluations of nurse practitioners have determined that they identify symptoms and signs more frequently than physicians²; improve continuity of patient care,² and reduce costs of clinical care by augmenting physicians.³ Our study is the first to demonstrate the usefulness of nurse practitioners in increasing the availability of family planning services throughout a state.

In the early 1970s, nurse practitioner programs were started to prepare nurses to deliver all family planning services with physician supervision for specific clinical problems. The aim of the training was to delegate as much decision-making as possible from the physician to the practitioner.

In 1977, the Regional Training Center at Emory University evaluated family planning nurse practitioners working in DHEW Region IV by analyzing questionnaires from 220 nurse practitioners and 110 family planning administrators in the eight states.⁴ Most of the administrators (92.8%) felt that their clinics were able to provide higher quality patient care as a result of employing family planning nurse practitioners. Eighty percent felt that there was an increase in the number of patients due to addition of family planning nurse practitioners. It was also found that nurse practitioners spent more time with new patients for physical examination, continuing patients for physical examination, follow-up patients, and emergency patients, and that a physician costs a family planning program an average of \$20.00/hour while a nurse practitioner costs only \$4.99/hour.⁴

In Tennessee, the shortage of physicians and the need for properly trained nurses were recognized as early as 1971, when Stephen Moore, M.D. (an Epidemic Intelligence Service officer assigned to Tennessee Department of Public Health) compared the outcome of family planning services in Bradley County (served by trained public health nurses) and Montgomery County (served by a health officer). Moore⁵ found that after appropriate on-the-job training, public health nurses could provide high-quality routine contraception care in those areas where there had previously been no physicians. The success of services provision was confirmed by similar oral contraception continuation rates in both counties. The number of active patients increased by 500% in the nurse-served county in contrast to 200% in the physician-served county and 150% in the state as a whole.

The medical protocol of nurse practitioners clearly reveals that they are allowed to provide almost every service that a *regular* family planning patient might need. The fact that they refer an average of only 15 (6%) of 270 patients every month demonstrates their ability to work both independently and in conjunction with physicians.

Of interest is the personal contraceptive history of nurse practitioners: 43% of those who ever used oral contraceptives and 56% of those who ever used intrauterine devices reported side effects or complications (compared to 40% and 20%, respectively, of current users in the general population).⁶ Fifty-eight percent of respondents used diaphragms (in fact most of them shifted

FAMILY PLANNING/Atrash

from oral contraceptives or intrauterine devices to diaphragms); however, only 5% of the patients served by nurse practitioners used diaphragms, which implies that nurse practitioners did not use their own preferences to influence their patients' choice of their methods of contraception.

Conclusion

By employing nurse practitioners, the Tennessee Department of Public Health achieved its primary aim of making family planning services available in all counties and to all Tennessee residents. It was also possible for local family planning programs to start special clinics (clinics for teenagers and evening clinics) to meet the needs of certain categories of women. More time and personnel were also available to educate patients

and community in the proper use of contraception.

Nurse practitioners now serve the vast majority of patients enrolled in the public family planning program, have decreased the physician work load, and have provided physicians more time to care for patients who need physician care.

REFERENCES

1. Tennessee Senate Public Acts, 1971, Chapter 400, Bill number 871.
2. Simborg DW, Starfield BH, Horn SD: Physicians and non-physician health practitioners: The characteristics of their practices and their relationships. *Am J Pub Health* 68:44-48, 1978.
3. Greenfield S, Komaroff A, Pass TM, et al: Efficiency and cost of primary care by nurses and physician assistants. *N Engl J Med* 298:305-309, 1978.
4. McElveen CE: The training and utilization of the family planning nurse practitioner in Region IV, DHEW, 1977. Unpublished study by Emory University Training Center.
5. Moore SH, Hutcheson RH, Danny PH: Using the public health nurse as a family planning clinician in rural areas: A program evaluation. *Advances in Planned Parenthood* IX-2:34-41, 1974.
6. Hatcher RA: *Contraceptive Technology 1980-1981*, 10th rev ed. Irvington Publications, 1980.

APRIL 1981						
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**TMA 146TH ANNUAL MEETING
Hyatt Regency Hotel—Knoxville**

Council on Medical Service Report D

Cost Effectiveness of State Certificate of Need Programs

(Appendix C)

Past House Action: A-78:38,315,331.

The Summary Report of the AMA's National Commission on the Cost of Medical Care, issued in December 1977, contained two recommendations related specifically to health planning and certificate of need (CON) programs. Recommendation 18 of the Commission supported the concept of planning and called for continued monitoring of existing CON legislation. Commission Recommendation 19 called for expansion of CON legislation to provider settings outside the hospital, including private physicians' offices, if CON proved to be effective as a cost containment technique in inpatient institutions. These recommendations were reported to the House of Delegates in Board of Trustees Report A at the 1978 Annual Meeting. In response to these Commission recommendations and the Board of Trustees report, the House took the following action:

(A) "Approval of Recommendation 18 and adoption of the following policy statement:

The concept of voluntary planning is supported. There should be continued monitoring of existing planning legislation as to costs, benefits, and effectiveness, and establishment of equitable techniques for administration of federal requirements. The AMA opposes the imposition of the public utility type of regulation of the medical profession, both institutional providers and private physician. Certificate of need is a nonproven concept at this time, and requires continued evaluation."

(B) "Referral of Recommendation 19 to the Board of Trustees for continuing study of the concept and periodic report to the House of Delegates on the evaluation of certificate of need for institutional facilities and equipment."

At this same meeting, the House also adopted Resolutions 68 and 134, calling on the AMA to "reaffirm its opposition to the extension of certificate of need at all levels of government to private physicians' offices."

In response to the actions of the House of Delegates, the Council on Medical Service, and its Ad Hoc Committee on Health Planning, have continued to monitor the implementation of CON programs at the state level under the National Health Planning and Resources Development Act of 1974 (P.L. 93-641) as amended by P.L. 96-79 in 1979. The purpose of this report is to inform the House of Delegates of the status of state CON programs and to review the evidence available to date regarding the effectiveness of CON programs as a cost containment technique.

State Certificate of Need Programs

At the time this report was written, 49 states had enacted CON statutes. (The state of Louisiana is presently without such a law.) Of the 49 states which now have CON laws, 14 include physicians' offices and 35 do not. During 1979 and early 1980, the states of Colorado, Idaho, Indiana, Minnesota, Mississippi, Mis-

souri, Nebraska, New Hampshire, Oregon, Pennsylvania, Utah and Vermont enacted new CON laws or amended their present statutes.

As the Council has previously reported to this House, the National Health Planning and Resources Development Amendments of 1979 (P.L. 96-79), extend federal CON requirements to cover all diagnostic and therapeutic equipment costing \$150,000 or more, regardless of location, if the equipment is to be used primarily for hospital inpatients. In late March, federal regulations implementing this section of P.L. 96-79 were published, with a 60-day public comment period. It is expected that states not in compliance with the new regulations will need to amend their present CON laws by 1981. At a minimum, this will require amendment of CON statutes in the 35 states which presently exclude physicians' offices and may require some modification of the statutes in the 14 states where physicians' offices are currently included under CON requirements.

Enactment of a CON program meeting federal requirements is mandatory for full designation of a State Health Planning and Development Agency (SHPDA) under P.L. 96-79. Under this law, in the first year of noncompliance, the Secretary of Health and Human Services (HHS) (formerly Health, Education and Welfare) may withhold 25% of all allotments, grants, loans and contracts under the Public Health Service Act, including the health planning law, the Community Mental Health Centers Act, the Alcohol Abuse and Alcohol Prevention Act, Treatment and Rehabilitation Act of 1970, and the Drug Abuse and Treatment Act of 1972 from states failing to meet federal CON requirements. This incremental penalty may be increased to 50% of such funds in the second year of noncompliance, 75% during the third year and complete withdrawal of the funds during the fourth year.

Cost Effectiveness of Certificate of Need

In recent years, a number of studies have been undertaken to assess the cost effectiveness of CON programs. Although the results of such studies cannot be termed conclusive, evidence available to date does indicate that CON has had little effect in containing costs, in the opinion of the Council.

In a 1973 report to the House of Delegates (CMS Report C, A-73), the Council on Medical Service concluded:

"It might be best stated that certificate of need is a two-edged sword. As much as certificate of need is intended to cut costs, avoid duplication, increase accessibility, etc., it can also stifle competition, be time-consuming and expensive and may not appropriately address the problem of duplication of facilities and services. Competition should be encouraged and new types of incentives should be created for the health and medical providers."

In its review of the research conducted since that time, the Council and its Ad Hoc Committee have found little to refute that earlier conclusion.

The Council's review of the literature on effectiveness of CON programs indicates that over 100 papers and/or studies have been completed, covering a period from 1970 to 1977. This information has been summarized, in part, by Urban Systems Research and Engineering of Cambridge, Mass., and Policy Analysis, Inc. of Brookline, Mass., under a 1978 contract with HEW. The summary, "Certificate of Need Programs: A Review, Analysis and Annotated Bibliography of the Research Literature," describes much of this research.

One of the more comprehensive studies of CON was published by David S. Salkever of Johns Hopkins University and Thomas N. Bice of Washington University under contract with HEW in 1976. Their report, "Impact of State Certificate of Need Laws on Health Care Costs and Utilization," concluded:

"The results of this analysis indicate that Certificate of Need (CON) controls reduced expansion in beds, but increased expansion in plant assets per bed, and

had no discernible negative effect on total investment (change in total plant assets). In other words, CON controls altered the composition of investment but not its magnitude, discouraging new beds, but encouraging investment in new equipment and services.

“In summary, our analysis points to the (perhaps) surprising conclusion that CON controls have contributed to cost inflation; thus, they have tended to produce the very result which they were designed to prevent. This conclusion must, of course, be treated cautiously due to the limitations of the analyses on which it was based . . . At a minimum, our findings signal the need for a much more thorough and detailed study of the effectiveness of CON regulation as a cost control device. The presumption of its effectiveness is clearly not warranted by the available evidence.”

It should be noted that the Bice-Salkever study analyzed the impact of CON over the period of 1967 to 1972, prior to the enactment of P.L. 93-641, when those programs in effect varied significantly from one state to the next.

More recently, the American Health Planning Association (AHPA) surveyed health systems agencies as to the outcomes of their CON reviews of hospitals and long-term care facilities. Approximately 80% of the 204 HSAs responded to the survey, which encompassed the three-year period 1976 through 1978. A summary of the survey results:

Hospitals

Number of new beds proposed in official CON or Section 1122 applications	11,488
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Number of new beds approved	7,840
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Number of new beds denied	3,648
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Skilled Nursing Home and Intermediate Care Facilities

Number of new beds proposed in official CON or Section 1122 applications	84,692
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Number of new beds approved	65,217
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Number of new beds denied	19,475
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Thus, the HSAs approved more than 60% of the proposed new hospital beds and approximately 87% of the new beds proposed for skilled nursing homes and intermediate care facilities. It should be noted that the figures quoted above from the AHPA survey do not necessarily reflect the number of hospital or long-term care beds actually constructed, since applying for a CON may not indicate either the need for the specific number of beds or the intent of the applicant to construct them.

In terms of applications for purchase of new equipment, according to the AHPA survey, the HSAs reviewed CON or Section 1122 applications totaling \$445.8 million and disapproved a total of \$37.5 million or approximately 8%. In applications for renovations of existing facilities, the HSAs reviewed proposals totaling \$4,634.6 million and denied \$340.8 million or approximately 7%. Finally, according to the AHPA survey, the planning agencies officially reviewed \$10.6 billion in proposed capital investment, denying \$2.3 billion or approximately 21%.

The data from the American Health Planning Association survey relate only to CON or Section 1122 applications which were officially reviewed by the health planning agencies. The AHPA survey also attempted to estimate cost savings

which resulted from proposed projects on which CON or Section 1122 applications were not filed by health care institutions because of anticipated rejection by the planning agencies. In the opinion of the Council, these latter estimates are difficult to quantify and cannot be considered an accurate measure of the impact of CON in restraining costs. This view has been supported recently by the U. S. General Accounting Office, which has questioned the inclusion of such estimates in the AHPA's cost saving projections.

The federally contracted research summary and other reports have examined a number of general hypotheses concerning the effectiveness of CON. Inasmuch as many of these reports addressed not one, but a number of these hypotheses, a list of specific studies reviewed by the Council is appended. A summary of findings or thinking to date on some of the more significant of these hypotheses follows:

1. *Hypothesis: CON will not control cost increases.*

Evidence from several studies over the period 1973 to 1977 indicates that CON programs have not demonstrated the capacity to restrain cost increases on the whole, although their impact on costs does vary from state to state and depends on the age and sophistication of the CON program. These studies note that CON addresses only one component of hospital cost inflation, and cannot influence such other components as third party reimbursement procedures and provider influence over demand for services (Havighurst, 1973; State of New York, 1977). An analysis of approval rates for services under CON and Section 1122 programs in 20 states also noted that projections of need used by review agencies were based on currently perceived levels of efficiency and placed a ceiling on capacity, not costs. The same study showed that more than half of the states and agencies surveyed place a much higher priority on improving the quality and distribution of health services than on containing costs (Lewin, September, 1975).

2. *Hypothesis: The CON process will be controlled by providers, protecting existing providers and reducing competition and efficiency.*

Some researchers have argued that providers will dominate the CON process for one of two reasons (Noll, 1975; Havighurst, 1973; Posner, 1974; Schlenker and Ellwood, 1973). The "capture theory" argues that regulation is an institution proposed and supported by regulated industries as a means of supplanting competition, and that the regulators become, in effect, a tool of the industry. The "political-economic theory" assumes that regulators attempt to serve some concept of the public interest, but find it difficult to identify this interest because the society contains groups with conflicting goals, some of whom are in a better position than others to provide information to regulators, influence legislators or overturn regulatory decisions in court. While the evidence demonstrating provider control of CON processes is not conclusive, some case studies indicate that provider control, in whatever form, must be considered. For example, researchers point out that state hospital associations have generally favored CON controls (Macro Systems, 1974; Curran, 1974), while others point out that, with few exceptions, provider reactions to regulatory decisions have been relatively moderate (Codman, 1977). In addition, some researchers have suggested that higher approval rates by review agencies for expansion projects than for new facilities demonstrates a dominance of such agencies by established providers and a bias against new entrants.

Another study (Sapolsky, 1977) suggests that provider dominance of CON process can be diluted by state bureaucracy, consumer members of HSA boards and by HSA staff. The degree of provider dominance of the CON process may also be influenced by such factors as the character of

local providers and their position on health planning, the personalities of the consumers on HSA boards and the determination of the state to restrain increases in hospital costs. Although the evidence of provider control is not clear cut, provider influence on the regulators, and upon those who control the regulators, does appear to impact on the CON process and, in the long range, on its effectiveness.

3. *Hypothesis: CON will favor the expansion of politically potent institutions at the expense of smaller ones.*

There is some evidence that medical centers or medical school-affiliated organizations with highly specialized services are virtually exempt from effective review and control under CON (Lewin, September, 1975; Britton, 1975). Another study of CON and Section 1122 programs found that political and organizational dynamics are always more decisive than the technical aspects of planning in implementing such programs, implying that need determinations tend to be political (Codman, 1977). There is also limited evidence to suggest that CON decisions tend to discriminate against proprietary hospitals and nursing homes, as opposed to nonprofit or public institutions (Lewin, 1975; Cares', 1975; Britton, 1975; Bicknell and Walsh, 1975).

4. *Hypothesis: CON will be expensive to administer.*

Several studies indicate that the administrative costs of the CON program and the costs of compliance tend to reduce or even eliminate any cost savings realized by CON controls (Havighurst, 1973; Noll, 1975; Kinzer, 1977). Additional research is needed to better quantify the administrative and compliance costs of CON, including costs resulting from additional institutional time devoted to planning, collection of data for use in CON applications, the need for legal assistance and higher construction costs resulting from delays due to the CON process.

5. *Hypothesis: CON will stifle innovation in delivery mechanisms such as HMOs.*

The relatively slow growth of such alternative delivery mechanisms as HMOs, surgicenters, free standing ambulatory care facilities and emergency centers has been ascribed by some writers to the stifling effect of the CON process (Havighurst, 1973; Noll, 1975; Hyman, 1977). However, the evidence that CON, in and of itself, has a dampening effect on innovation in delivery systems is not compelling. In fact, one study indicated that health planners usually react simply on a "yes/no" basis when a CON application is submitted, rather than exploring the possibility of less costly alternatives or the use of shared services. This would seem to indicate that CON does little to either stimulate or stifle innovation (State of New York, 1977).

It is also difficult to argue that CON stifles the development of HMOs when P.L. 96-79 virtually excludes certain types of HMO inpatient facilities from planning authority review and places other restrictions on planning agency reviews of HMO applications designed to prevent these agencies from posing barriers to HMO development.

6. *Hypothesis: Individual CON agency board members will favor health facilities growth in their own areas.*

Evidence is again incomplete, but preliminary findings indicate that HSA consumer board members, in particular, tend to support technological and capital investment based on parochial interests (Codman 1977; Lewin, 1975). These decisions may be encouraged since the financing for local services often is received from outside the community, i.e., Medicare/

Medicaid. Thus, the cost impact is diffused while the service benefit is concentrated. Another study, however, points out that consumers on an HSA board may not be typical in that they may have been selected in part for their ability to rise above parochial interests (Altman, 1977).

7. *Hypothesis: CON programs will be hampered by the difficulty of developing standards.*

The lack of generally accepted standards and criteria on which to base CON decisions is a common theme of the literature on this subject. The lack of consensus on appropriate criteria is best illustrated by the response to the National Guidelines on Health Planning published in 1978. More than 70,000 negative comments on the Guidelines were received by the Department of Health, Education and Welfare prior to publication. A detailed rationale for the specific resource standards contained in the Guidelines has yet to be provided; yet the criteria contained in the Guidelines are commonly found in the Health Systems Plans developed by HSAs and are used by the agencies in reviewing CON applications, although the standards may not be directly applicable to the local area.

Conclusion and Recommendation

Based on its review of the research to date, the Council on Medical Service, and its Ad Hoc Committee on Health Planning, find little evidence to suggest that CON programs are effective in restraining health care costs or in limiting capital investment. In the absence of such evidence, the Council *recommends* that current Association policy opposing the extension of CON to private physicians' offices be reaffirmed.

The Council will continue to monitor the implementation of CON programs and their cost effectiveness, and will report to the House of Delegates as appropriate.

REFERENCES

- Altman D: The politics of health care regulations: The case of the national health planning and resources development act, unpublished paper. M.I.T. Department of Political Science, August 1977.
- Bicknell W, Walsh D: Certification of need: The Massachusetts experience. Massachusetts Department of Public Health, Boston. *N Engl J Med* pp 1054-1061, May 15, 1975.
- Bicknell W, Walsh D: Critical experiences in organizing and administering a state certificate of need program. Boston, Mass, Harvard School of Public Health. *Public Health Reports* pp 29-45, Jan-Feb 1976.
- Britton CR: Certificate of need legislation in health care delivery, unpublished thesis. Sloan School of Management, M.I.T., May 1975.
- Codman Research Group: Final report year 1: The impact of health planning and regulation on the pattern of hospital utilization in New England. Contract no. 291-76-0003. Cambridge, Mass, Sept 1, 1977.
- Curran WJ: A national survey and analysis of state certificate of need laws for health facilities, 1974.
- Havighurst C: Franchising experience from other industries and its relevance for the health field. *Management Memorandum on Hospital Franchising*. Chicago International Health Advisory Council, 1973.
- Hyman JJ: Introduction to key issues in regulation of health facilities and services. In *Health Regulations-Certificate of Need and 1122*, pp 169-185. Germantown, Md, Aspen Systems Corp, 1977.
- Kinzer DM: *Health Controls Out of Control*, 1977.
- Lewin and Associates, Inc: *Evaluation of the Efficiency and Effectiveness of the Section 1122 Review Process*. Springfield, Va, US Department of Commerce, National Technical Information Service, Sept 1975.
- Lewin and Associates, Inc: *Nationwide Survey of State Health Regulations*. Springfield, Va, US Department of Commerce, National Technical Information Service, Sept 1975.
- Macro Systems, Inc: *The Certificate of Need Experiences: An Early Assessment*. Springfield, Va, US Department of Commerce, National Technical Information Service, 1974.
- Noll R: The Consequences of public utility regulation of hospitals. *Controls of Health Care—Papers of the Conference on Regulation of the Health Care Industry*, Jan 7-9, 1974, pp 25-48. Washington, National Academy of Sciences, 1975.
- Posner RA: Certificates of need for health care facilities: A dissenting view, in Havighurst C (ed): *Regulating Health Care Facilities Construction*. Washington, DC, American Enterprise Institute for Public Policy Research, 1974.
- Salkever DS, Bice TW: *Impact of State Certificate of Need Laws on Health Care Costs and Utilization*. Washington, DC, DHEW, National Center for Health Services Research, HRA 106-74-57, Jan 31, 1976.
- Sapolsky HM: Interjurisdictional relations in health: Some alternative arrangements. Prepared for delivery at the annual meeting of the American Political Science Association, Washington DC, Sept 1-4, 1977.
- Schlenker R, Ellwood P: Medical inflation: Causes and policy options for control, unpublished paper. Minneapolis, Minn, Interstudy, March 1973.
- State of New York Legislative Commission on Expenditure Review: Program Audit Health Planning in New York State. Albany, NY, Jan 3, 1977.
- Urban Systems Research and Engineering, Cambridge, Mass, and Policy Analysis, Inc, Brookline, Mass: Certificate of need programs: A review, analysis and annotated bibliography of research literature. DHEW, HRA contract no. 231-77-0114, Nov 1978.

Council on Medical Service Report G

Federally Funded Health Clinics

(Appendix D)

Past House Action: A-79:208-210.

At the 1979 Annual Meeting, the House of Delegates adopted Council on Medical Service Report J: Physician-Directed Rural Health Clinics, which described quality assurance mechanisms and reimbursement procedures in the "Rural Health Clinics" certified under P.L. 95-210, the Rural Health Clinic Services Act of 1977. In adopting Report J, the House also requested the Council to conduct a similar review of quality assurance and reimbursement procedures in other types of federally funded health clinics, such as urban and rural community health centers, migrant health clinics, Appalachian health centers, and similar types of publicly funded primary health care centers. The present preliminary report contains the information obtained by the Council to date.

The House of Delegates' request for review of these facilities was in part a response to the concerns expressed in Resolution 124, which was also considered at the 1979 Annual Meeting but not adopted. Resolution 124 called for the AMA to oppose the present system of Medicare payment for services in publicly funded clinics and seek payment on the basis of the costs of medical services only, consistent with the reimbursement paid private physicians and no higher than this rate. Accordingly, this report does begin to address concerns spoken to by Resolution 124 as well.

In conducting its review of this subject, the Council met with representatives of the Department of Health and Human Services (HHS) Bureau of Community Health Services, which has program responsibility for a majority of the federally funded health clinics. The overall purpose of these clinics is the provision of primary health care services in medically underserved rural and urban areas. While maternal and child health services are given first priority in the establishment and operation of such federally funded clinics, other priority areas addressed by federal legislation may be included. These additional priorities include health services for migrant workers and Appalachia residents; family planning services; genetic services (i.e., sickle cell anemia, hypertension, and hemophilia); black lung services; services directed to sudden infant deaths; and home health care and related services for the elderly. During 1979, some 862 such clinics provided services to about 4.6 million people.

Federal clinics providing primary care services in medically underserved rural and urban areas may be funded by a single grant program or more likely a combination of grant programs, depending on the area served and its special needs. Federal grant programs which allocate resources to underserved areas can be categorized in the following general manner:

- *Community Health Centers (CHC) Program*

Community Health Centers Grants, authorized by Section 330 of the Public Health Service Act, provide funds to medically underserved areas (MUAs) for (a)

planning and developing community-based and controlled health centers, and (b) operating community health centers and specific projects conducted by such centers. Medically underserved areas are determined on the basis of infant mortality rates; number of primary care physicians per 1,000 population; percentage of population over age 65; and percentage of low-income population.

Public or private nonprofit entities are eligible to apply for federal funds under this grant program, following a determination by the Public Health Service that the applicant is located in a formally designated MUA.

The FY 1979 appropriation for the Community Health Centers Program totaled \$253 million.

- *National Health Service Corps (NHSC)*

The National Health Service Corps, authorized by Section 329 of the Public Health Service Act, provides for federally salaried health professionals (physicians, nurses, nurse practitioners, physician extenders, dentists, and allied health practitioners) in communities certified as health manpower shortage areas (HMSAs). Health manpower shortage areas are defined as: (a) an urban or rural area—not necessarily conforming to the geographic boundaries of a political subdivision—that is considered a rational area for the delivery of health services which the Secretary of HHS determines has a shortage of health manpower, (b) a population group in which the Secretary finds a health manpower shortage, or (c) a public or nonprofit private medical facility or other public facility which the Secretary determines has a health manpower shortage. Based on some of the HMSA designations to date, the Council believes that the criteria utilized by the Secretary in identifying such shortage areas are rudimentary and in many cases arbitrary, and that improved methodology for assessing the adequacy of manpower supply is of prime importance.

This program is designed to assist rural and urban communities in the recruitment, placement, and retention of health care personnel with particular emphasis on primary care physicians, physician extenders, and dentists. In 1979, there were 1,829 NHSC personnel assigned to rural and urban communities with approximately 1,000 of these assigned to federally funded clinics. Budget appropriation for the year was \$62.9 million.

- *Migrant Health Program*

The Migrant Health Program, authorized by Section 319 of the Public Health Service Act, provides grant funds to support the development and provision of primary care and supplemental health services to migrant and seasonal agricultural workers and their families. In 1979, \$34.5 million was appropriated for the Migrant Health Program.

- *Appalachian Health Program*

The Appalachian Health Program, authorized by Section 202 of the Appalachian Regional Development Act, provides grant funds in support of health services in designated areas of need in Appalachian states. Projects must be consistent with the Appalachian Health Strategy of the state in which health services are being proposed or delivered. Recipients of such proposed health services must be residents of an area designated under the Appalachian Regional Development Act as being in "Appalachia."

Funds appropriated in FY 1979 for this program totaled \$26.3 million.

- *Health Underserved Rural Areas (HURA) Program*

The Health Underserved Rural Areas Program, authorized by Section 1110, Title XI of the Social Security Act, is a rural health research and demonstration grant program to provide services to Medicaid-eligible persons. This program generally utilizes existing health care resources which are currently financially

self-sufficient and are willing to expand services for Medicaid recipients. The HURA program is similar to the Community Health Centers Program, except that HURA projects are not required to establish a community board representative of those individuals being served.

This program had an FY 1979 appropriation of \$16.5 million.

ADMINISTRATIVE INITIATIVES

In an effort to integrate and coordinate the above federal grant programs for rural and urban areas, the Bureau of Community Health Services has established two administrative entities known as Rural Health Initiative (RHI) and Urban Health Initiative (UHI). The RHI coordinates federal funds from the Community Health Centers Program, Migrant Health Program, Health Underserved Rural Areas Program, Appalachian Health Program, and the National Health Service Corps for rural facilities, while the Urban Health Initiative coordinates the Community Health Centers Program and the National Health Service Corps for urban facilities.

Federal programs coordinated by the RHI and UHI entities may be further supplemented by other federal categorical grants such as Maternal and Child Health Research and Training Grants, Family Planning Grants, Emergency Medical Services Grants and Black Lung Grants. Through the RHI, for example, a rural community could receive federal funds from the Community Health Centers Program and the Migrant Health Program to establish a rural health center and develop primary care services. Medical staffing could be secured through assignment of National Health Service Corps physicians. The rural applicant could establish relationships between its primary care activity and the state and local Maternal and Child Health and Crippled Childrens' programs to obtain additional funds for the provision of these services, as well as with state or local drug abuse and alcoholism programs for still further monies. Through this conjoint funding approach the options available to prospective applicants are virtually endless, depending on their grantsmanship skills.

The Bureau of Community Health Services identifies the following objectives for the RHI and UHI entities:

Rural Health Initiative Objectives

- To increase the provision of primary health care services to medically underserved rural areas.
- To identify and make maximum use of existing health care resources, by using new approaches and concepts directed at combining, coordinating, and strengthening health service delivery resources and activities through establishment of linkages between primary, secondary, and tertiary care.
- To emphasize effective project management, higher provider productivity, and movement toward economic viability.
- To develop mechanisms to provide better health care to the Medicaid-eligible population by integrating this group into a single rural health care delivery system.
- To attract and use nonphysician providers wherever possible to extend the capacity of physician providers.
- To integrate primary care services into a complete system of health care delivery that is financially viable, professionally attractive, and able to become self-sustaining.

Urban Health Initiative Objectives

- The development, provision, and maintenance of an integrated primary health care delivery system for a cross-section of urban residents, though

- targeted to underserved and high-risk populations.
- Economically viable group practices of health professionals providing a system of quality care.
- The retention and continuity of primary care providers beyond NHSC service commitments.
- Integration of NHSC professionals with other health resources (maternal and child health, family planning, hospitals, teaching institutions, public health programs).

QUALITY ASSURANCE

In January 1979, the Bureau of Community Health Services began to require the use of "Productivity/Effectiveness Measures" by all types of federally funded health clinics within its purview, to assist such clinics in the establishment and operation of quality assurance programs. This effort is also intended to aid the Bureau in monitoring the overall effectiveness of the clinic programs in terms of cost and quality of health services delivered.

Since the objectives, scope of services, and service capabilities vary from one clinic to the next, a general framework for quality assurance identifying minimum essential standards in the areas of pediatric, adolescent, maternity, and adult care is currently being utilized. Using this general framework, clinics are expected to develop complete quality assurance programs tailored to their individual circumstances. Periodic reporting of specific performance levels and certain data elements is required by the Bureau.

The quality assurance program for federally funded clinics is comprised of three essential components: (a) a specific health care plan based on assessment of community needs, (b) a "tracking system" to identify enrolled patients requiring follow-up and/or continuing care, and (c) quality review procedures to evaluate actual performance. These components and their respective requirements are described by the Bureau as follows:

Health Care Plans

Each clinic is required to submit an annual plan identifying health objectives for the coming year for all specific groups of patients, and, at a minimum, schedules for the preventive health services to be provided to pediatric, adolescent, obstetric, and adult patients.

The preventive services for these four patient groups are required to include at least the items listed below:

- The routine preventive health services recommended by the American Academy of Pediatrics for the age groups birth to age 12 and ages 12 to 19 years (history, physical measurements, developmental assessments, laboratory tests, and immunizations, vision and hearing screening, and dental assessments with appropriate follow-up when indicated).
- The routine services for maternity care recommended by the American College of Obstetricians and Gynecologists and American Public Health Association, with prompt referral or appropriate management of high-risk pregnancies, and arrangements for labor and delivery for all pregnancies.
- For adult care, routine preventive health services including medical, social, and occupational histories and health hazards assessments. Physical examinations and laboratory tests appropriate to age and health risks should include blood pressure measurement and appropriate management when indicated, simple screening for vision and hearing, dental assessments, and simple cancer screening including skin examinations, stool guaiac, breast examinations, and Pap smears.

- Nutrition assessments (including use of growth charts for infants and children from birth to age 12 years), with counseling and referral when indicated to food assistance programs.
- Patient or parent education covering normal growth and development, anticipatory guidance, nutrition, accident prevention, family life, and preventive care for infants and children from birth to age 12 years. Adolescent (age 12-19 years) education and counseling covering normal maturation, nutrition, accident prevention, preventive health care, school and peer adjustment, family relationships, personal values clarification, sexuality, and substance abuse. Maternity patient education covering hygiene in pregnancy (bathing, activity, intercourse), nutrition in pregnancy, labor and delivery, family planning, and infant care and nutrition. Adult patient education covering breast self-examination, nutrition, exercise, accident prevention, preventive health care, and substance abuse.
- Psychosocial needs assessment with referral when indicated to social and mental health services for all patient groups.
- Family planning information and services for all patient groups at risk.
- Information on sexually transmitted diseases, and screening, treatment or referral for treatment for individuals at risk.

Tracking Systems

The second component of the quality assurance program is a clinical information or tracking system which identifies all important conditions and services for which follow-up care is indicated. The Bureau of Community Health Services requires that such tracking systems be used to (a) alert staff and patients to visits which should be scheduled for routine preventive services and chronic disease follow-up, (b) alert staff and patients regarding scheduled missed appointments, and (c) monitor the completion of referral care.

Quality Review Procedures

The third component of the quality assurance program requires each federally funded clinic to have an internal quality assessment program which includes periodic patient care review. Clinics are required to keep records of the work of quality assessment committees, including members, meeting dates and minutes, along with audit topics and methods, recommendations, and corrective actions taken by the clinic.

The internal quality assurance program must, at a minimum, report periodically to the Bureau on the following administrative and clinical indicators of performance.

Administrative Indicators

- *Physician productivity:* a range of 4,200 to 4,600 on-site encounters per full-time clinic physician per year is used as a criterion of appropriate utilization for the clinics that have been in operation for at least two years.
- *Average cost:* average cost per medical encounter (excluding laboratory, x-ray, and pharmacy) should be between \$16 and \$24 for all clinics that have been operational for at least two years.
- *Reporting compliance:* on a timely basis, all operational primary health care centers are expected to submit complete, accurate, and valid reports in accordance with the Bureau Common Reporting Requirements (BCRR).

Clinical Indicators

- *Immunization:* at least 90% of records on pediatric patients (age 17 and under) must show complete immunization of the patient.
- *Prenatal care:* each clinic is required to enroll a specific number of patients

for provision of prenatal services, either within the clinic or through referral to a comprehensive maternal care program. The specific number of such patients will be established for each clinic relative to the number of persons served by the clinic and the crude birth rate per thousand in the clinic's service area.

- *Family planning counseling for adolescents:* at least 90% of patients aged 19 years or under receiving medical family planning services must have a documented counseling session prior to or at the time of receiving instruction and assistance with any family planning method.
- *Pap smear follow-up:* all Pap smears reported as class III, IV, and V must have documented follow-up and further diagnostic study within six weeks by a gynecologist (within the clinic or by referral).
- *Hypertension screening:* no less than 90% of records on patients age 10 and over must show a blood pressure measurement either on the most recent visit or within the year prior to the most recent visit.
- *Anemia screening:* at least 90% of records on children 24-27 months must show a hemoglobin or hematocrit measurement, and at least 90% of records on female family planning patients must show a hemoglobin or hematocrit measurement.

CLINIC REIMBURSEMENT

In addition to monies received under the federal grant programs (Community Health Centers Program, Migrant Health Program, Appalachian Health Program, Maternal and Child Health Program, etc.) federally funded clinics may receive reimbursement for their services from third parties and directly from clinic patients. According to the Bureau of Community Health Services, reimbursement from third parties during 1979 defrayed 25.4% of the total operating costs of these clinics and direct payments by clinic patients defrayed 12.9% of the total costs. The proportions of third party reimbursement from different sources were as follows:

Medicaid	12.7%
Private Insurance	6.7%
Other (e.g., CHAMPUS)	3.3%
Medicare	2.4%
Title XX	0.3%

Eleven percent of the total operating costs were met by state and local contributions and the remaining operating costs (50.7%) were met through federal grant monies.

Medicaid serves as the principal source of third party reimbursement to federally funded clinics. In virtually all instances, Medicaid reimbursement is based on a fixed rate per visit negotiated between the clinic and the state's Medicaid program. This flat rate is usually based on the mean cost for a clinic visit (the mean cost for all federally funded clinics was approximately \$26 per patient visit in 1979).

While the Medicaid-negotiated rates may vary from one clinic to another, the rate cannot exceed 80% of the "reasonable cost" of such services as determined by Medicare. If federally funded clinics are not Medicaid-certified, then reimbursement is provided in the same manner as for a hospital outpatient department—usually on a "reasonable charge" basis.

According to the Bureau of Community Health Services, most of the 862 federally funded clinics (719) are reimbursed by Medicare Part B on a reasonable charge basis for services provided eligible beneficiaries. The 143 remaining clinics have direct arrangements with the Health Care Financing Administration Division of Direct Reimbursement for Medicare reimbursement on a reasonable

cost basis.

Direct patient payments to clinics (12.9% of total clinic operating costs) are on a fee-for-service basis. These fees are established annually by the clinic, and are based on the cost of clinic operations per unit of service, or per visit. Depending on the clinic patient's income, these fees may be adjusted on a sliding scale established by the community. In general, those individuals having incomes below a poverty index level (determined annually by the Community Services Administration) receive clinic services free of charge, while those individuals having incomes twice the poverty index are required to pay the full fee for service established by the clinic.

Private insurance carriers, including Blue Cross/Blue Shield, may reimburse federally funded clinics which are licensed by the state. These licensed clinics are reimbursed by private carriers in the same manner as would be a hospital outpatient clinic, and for the same general types of services. However, since a majority of the federally funded clinics are not licensed by the state and because the clinics provide largely preventive rather than medical diagnostic and therapeutic services, private carrier reimbursement has not been widely available to date.

SUMMARY

Based upon its initial study of this subject, the Council on Medical Service is impressed with the complexity of issues involved in the provision of health services by federally funded clinics. Such clinics have been in existence, in one form or another, since the mid-1960s (neighborhood health centers established under the Economic Opportunity Act of 1964 were the forerunners of many of today's federally funded clinics); federal financial support of such facilities has increased steadily.

According to the Bureau of Community Health Services, total federal grant dollars for these clinics has increased from \$234.9 million in 1974 to \$304.0 million in 1979, a 29% increase in federal support during this five-year period (excluding appropriations for Appalachian Health Program and National Health Service Corps). In addition to increased federal support, these clinics during the same five-year period have benefited from a corresponding increase in third party reimbursement and direct patient payment from 17% of total clinic operating costs in 1974 to approximately 38% in 1979. However, while the original legislative intent was for these clinics to become financially self-sustaining, the Council is unaware of any clinics which have achieved this status or are likely to do so in the future.

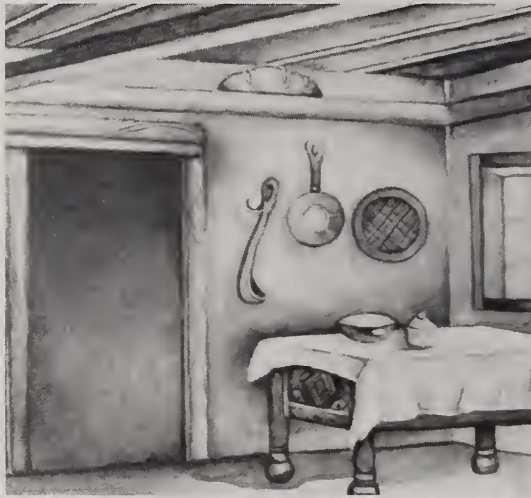
Recent studies of federally funded clinics have revealed problems in a number of them—problems of underutilization because of insufficient patient demand, excess clinic capacity resulting from overassessment of community needs, duplication of services, significantly higher costs for care compared to private physicians' offices, excessive administrative costs, lack of a balanced mix of services, inadequate or nonexistent linkages with private physicians, dentists and pharmacies, and questions concerning the quality of services provided by these clinics. The Council believes that these concerns merit study, and will conduct this study as the basis for a further report with recommendations to this House of Delegates.

The Council has benefited from discussion of this subject with representatives of the Bureau of Community Health Services, and is favorably impressed by initiatives recently undertaken by this Bureau to help improve overall effectiveness of these clinics in providing needed health care for medically underserved areas.

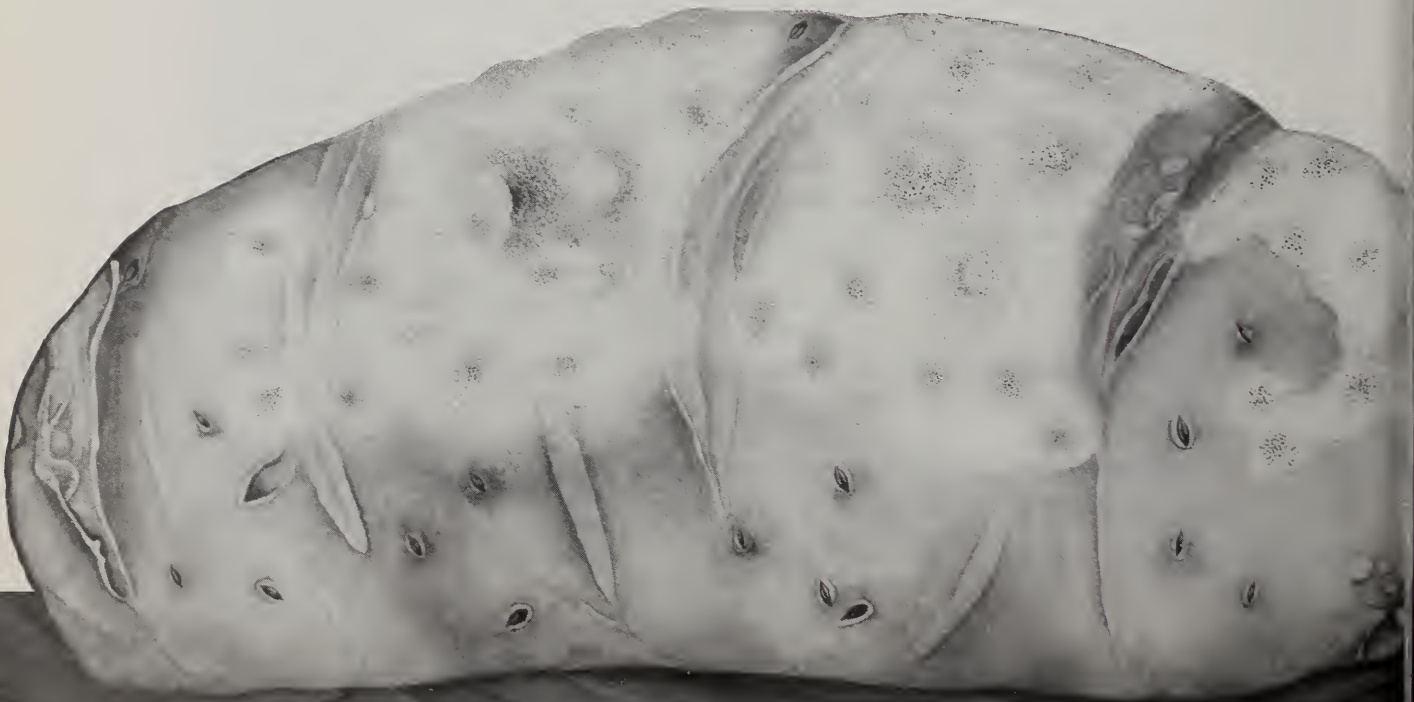
The Council is pleased to provide the information contained in this preliminary report and will submit further reports on this subject. 

Yesterday's Folk Remedy:

A rye loaf in the rafters.



Early in this century in Central Europe, almost every farm family kept a loaf of moldy rye bread on one of the kitchen beams. When any family member was cut or bruised, it was an old custom to cut a thin slice from the outside of the loaf, mix it into a paste with water, and apply it to the wound with a bandage. It was believed that no infection would then result from the cut.¹



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for the treatment* of
known or suspected
staphylococcal
infections such as:

- Acute sinusitis
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- Impetigo
- Secondarily infected dermatitis
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In serious, deep-seated
staph infections, 500 mg
q.i.d. dosage is
recommended.[†]

- Tegopen has been reported active against 96% of *Staphylococcus aureus*.²
- 80% of *S aureus* has been reported resistant to amoxicillin and ampicillin. ‡²
- 88% of *S aureus* has been reported resistant to penicillins G and V. ‡²
- Staph resistance to erythromycin may develop during a course of therapy.³



Available as 500-mg and 250-mg capsules
and Oral Solution 125 mg/5 ml.

Tegopen[®] (cloxacillin sodium) Today's Penicillin for Today's Physician

1. Florey HW, Chain E, Heatley NG, et al: *Antibiotics*. London, Oxford University Press, 1949, p 2.
2. Bac-Data Bacteriologic Report, Professional Market Research, 1978-1979. The clinical significance of *in vitro* data is unknown.
3. Erythromycin prescribing information (in *Physicians' Desk Reference*, ed 34. Oradell, NJ, Medical Economics Co, 1980) states that staph resistance may develop during treatment.

See brief summary of prescribing information on
an adjoining page.

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*Note: The choice of Tegopen should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates that the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semisynthetic penicillin.

†In serious, life-threatening infections, oral preparations of the penicillinase-resistant penicillins should not be relied on for initial therapy.

‡Not all isolates may have been tested using both discs.

Tegopen®

(cloxacillin sodium)
Capsules and Oral Solution

Brief Summary of Prescribing Information

For complete information, consult Official Package Circular.
(12) 9/11/75

INDICATIONS:

Although the principal indication for cloxacillin sodium is in the treatment of infections due to penicillinase-producing staphylococci, it may be used to initiate therapy in such patients in whom a staphylococcal infection is suspected. (See Important Note below.)

Bacteriologic studies to determine the causative organisms and their sensitivity to cloxacillin sodium should be performed.

IMPORTANT NOTE

When it is judged necessary that treatment be initiated before definitive culture and sensitivity results are known, the choice of cloxacillin sodium should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semi-synthetic penicillin.

Recent studies have reported that the percentage of staphylococcal isolates resistant to penicillin G outside the hospital is increasing, approximating the high percentage of resistant staphylococcal isolates found in the hospital. For this reason, it is recommended that a penicillinase-resistant penicillin be used as initial therapy for any suspected staphylococcal infection until culture and sensitivity results are known.

Cloxacillin sodium is a compound that acts through a mechanism similar to that of methicillin against penicillin G-resistant staphylococci. Strains of staphylococci resistant to methicillin have existed in nature and it is known that the number of these strains reported has been increasing. Such strains of staphylococci have been capable of producing serious disease, in some instances resulting in fatality. Because of this, there is concern that widespread use of the penicillinase-resistant penicillins may result in the appearance of an increasing number of staphylococcal strains which are resistant to these penicillins.

Methicillin-resistant strains are almost always resistant to all other penicillinase-resistant penicillins (cross-resistance with cephalosporin derivatives also occurs frequently). Resistance to any penicillinase-resistant penicillin should be interpreted as evidence of clinical resistance to all, in spite of the fact that minor variations in *in vitro* sensitivity may be encountered when more than one penicillinase-resistant penicillin is tested against the same strain of staphylococcus.

CONTRAINDICATIONS:

A history of a previous hypersensitivity reaction to any of the penicillins is a contraindication.

WARNING:

Serious and occasionally fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin therapy. Although anaphylaxis is more frequent following parenteral therapy it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with a history of sensitivity to multiple allergens.

There have been well documented reports of individuals with a history of penicillin hypersensitivity reactions who have experienced severe hypersensitivity reactions when treated with a cephalosporin. Before therapy with a penicillin, careful inquiry should be made concerning previous hypersensitivity reactions to penicillins, cephalosporins, and other allergens. If an allergic reaction occurs, the drug should be discontinued and the patient treated with the usual agents, e.g., pressor amines, antihistamines, and corticosteroids.

Safety for use in pregnancy has not been established.

PRECAUTIONS:

The possibility of the occurrence of superinfections with mycotic organisms or other pathogens should be kept in mind when using this compound, as with other antibiotics. If superinfection occurs during therapy, appropriate measures should be taken.

As with any potent drug, periodic assessment of organ system function, including renal, hepatic, and hematopoietic, should be made during long-term therapy.

ADVERSE REACTIONS:

Gastrointestinal disturbances, such as nausea, epigastric discomfort, flatulence, and loose stools, have been noted by some patients. Mildly elevated SGOT levels (less than 100 units) have been reported in a few patients for whom pretherapeutic determinations were not made. Skin rashes and allergic symptoms, including wheezing and sneezing, have occasionally been encountered. Eosinophilia, with or without overt allergic manifestations, has been noted in some patients during therapy.

USUAL DOSAGE:

Adults: 250 mg. q. 6h.

Children: 50 mg./Kg./day in equally divided doses q. 6h. Children weighing more than 20 Kg. should be given the adult dose. Administer on empty stomach for maximum absorption.

N.B. INFECTIONS CAUSED BY GROUP A BETA-HEMOLYTIC STREPTOCOCCI SHOULD BE TREATED FOR AT LEAST 10 DAYS TO HELP PREVENT THE OCCURRENCE OF ACUTE RHEUMATIC FEVER OR ACUTE GLOMERULONEPHRITIS.

SUPPLIED:

Capsules—250 mg. in bottles of 100, 500 mg. in bottles of 100.
Oral Solution—125 mg./5 ml. in 100 ml. and 200 ml. bottles.

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Mycoplasma Pneumonia

CHARLES E. KOSSMANN, M.D., Editor

STEPHEN L. NEWMAN M.D.:

A 34-year-old white man entered the Veterans Administration Hospital with the chief complaint of a nonproductive cough for two weeks, accompanied in the second week by a sore throat, fever, malaise, earache and nasal congestion. About five days before being referred for admission he saw his private physician who made a diagnosis of atypical pneumonia.

Previous pulmonary history was unremarkable except for a five-year period of smoking one pack of cigarettes per day, but he had not smoked for eight years.

Temperature on admission was 99°F, blood pressure 120/70 mm Hg, pulse rate 80/min and respiratory rate 14/min. He was in no distress, but there was bilateral serous otitis media, and rales and expiratory wheezes were heard over the right upper lobe.

A roentgenogram of the chest showed interstitial infiltration of the right upper lobe, in which air-containing bronchioles were visible. The hematocrit was 45%, white blood cell count 7,000/cu mm, serum bilirubin 1.3 mg/dl. A bedside cold-agglutinin test¹ was positive and was confirmed by the central laboratory with a titer of 1:512. Sputum smears and cultures for tubercle bacilli and fungi were negative. The patient was followed by his private physician after he received a course of erythromycin in the hospital of 500 mg orally four times a day, for three weeks. The roentgenograms had started to show clearing and the patient was asymptomatic.

JOHN P. GRIFFIN, M.D.:

The history of the pneumonia caused by *Mycoplasma pneumoniae* goes back a number of decades to the recognition of what was originally called atypical pneumonia, the term used by the referring physician in this case. A group of pneumonias were recognized as being somewhat less malignant than the usual pneumococcal pneumonia, not associated with the identification in the laboratory of the *Streptococcus pneumoniae*, and not characterized by the usual symptoms or signs of lobar consolidation. They were called "atypical" as compared to the usual pneumococcal pneumonia. In 1943 the first significant effort to identify these pneumonias as a

separate group was published from the Boston City Hospital by Peterson, Ham, and Finland² who recognized that there was an association of cold agglutinins with a certain percentage of these infections. From that time forward patients with the disease were said to have primary atypical pneumonia.

The following year a bacteriologist at Harvard, Dr. Monroe Eaton, in conjunction with the Armed Forces Epidemiologic Board, concerned because of the high incidence of disabling respiratory diseases in the recruit camps across the country during World War II, succeeded in isolating from some patients a filterable agent³ which retained the ability to cause the disease after being passed through a filter with a degree of porosity which excluded bacterial agents. The inference was made that these smaller particles must be viruses, and that was the beginning of the appellation "viral pneumonia." Then Eaton, in classic pursuit of Koch's postulates, passed this infectious material into cotton rats with a variable degree of success.

Eaton's agent was ignored for more than 15 years, as his work could not be reproduced by his colleagues, but in 1957 Liu at Kansas University applied indirect immunofluorescence and found Eaton's agent could be identified along the surface of bronchial epithelium in chick embryos.⁴ Several years later Marmion and Goodburn⁵ found that this agent was inhibited by gold salts, considered to have no effect on viruses. Since gold was supposedly effective against the pleuro-pneumonia like organisms (PPLO) that had been described in the last century as associated with infectious agalactia in cattle, Marmion and Goodburn inferred that the Eaton agent might indeed be such an organism, and within a matter of months Chanock, Hayflick and Barile⁶ were able to grow it on artificial media. As one characteristic of a true virus is that it requires living cells for its support and growth, the ability of the Eaton agent to grow on an agar enriched with human protein, yeast extract and other supplements but without living material,

From the Department of Medicine, University of Tennessee, 951 Court Ave., Memphis, TN 38163.

Presented Aug. 15, 1979.

established these microorganisms despite their filterable size, as nonviral. Their nomenclature has changed a number of times since, and we currently classify these agents as members of the family Mycoplasmataceae, and refer to the specific cause of the atypical pneumonia as the Eaton agent, or *Mycoplasma pneumoniae*.

In studies at the National Institutes of Health, Chanock and his colleagues⁷ continued the pursuit of Koch's postulates for their agent. They produced pneumonia in volunteer Marine recruits, and found that a form of tetracycline, Declomycin, was helpful in resolving the acute pneumonitic manifestations of the disease. The last of Koch's postulates, as finally fulfilled, established *Mycoplasma pneumoniae* as the cause of cold-agglutinin positive, atypical pneumonia.

Epidemiology

Most of the epidemiology of the infection was worked out in recruit camps where the organism was endemic, and where it appeared to spread slowly but with seasonal outbreaks at different locations in the country. As few as 10% but sometimes as many as 50% of the young men going through an 8- to 12-week basic military training experience were afflicted with a *Mycoplasma pneumoniae* infection. Of those infected, Chanock estimated that approximately 10% developed the syndrome of atypical pneumonia; of the remainder, many developed other forms of respiratory and systemic illness which caused sufficient morbidity to require their temporary removal from troop training activity.

TABLE 1

CLINICAL MANIFESTATIONS OF MYCOPLASMA PNEUMONIAE INFECTION*

Respiratory

1. Upper respiratory tract and otologic: pharyngitis, bronchitis, myringitis
2. Pulmonary: pneumonia, pleural effusion, abscess formation

Nonrespiratory

1. Hematologic: cold hemagglutinin hemolytic anemia, thrombocytopenic purpura
2. Gastrointestinal: gastroenteritis, hepatitis
3. Musculoskeletal: myalgias, arthralgias, polyarthritis
4. Cardiovascular: pericarditis, myocarditis
5. Dermatologic: erythema multiforme, other rashes
6. Neurologic: meningitis, meningoencephalitis, peripheral and cranial neuropathy, cerebellar ataxia
7. Miscellaneous: generalized lymphadenopathy, splenomegaly

*From Murray et al¹⁰ with permission.

The large study by Alexander and his colleagues⁸ in a prepaid medical group at the University of Washington, the first evaluation of this infection in a civilian population, demonstrated no sex predilection of the disease. It was established by Alexander that this infection affected primarily individuals in their younger years. It was uncommon below the age of 5, was most usual in adolescent years, which included many of the young military recruits, and was again much less common in older age groups.

Family studies by Foy⁹ also with the University of Washington group, showed that within the closed environment of a family the agent did spread by direct contact via the respiratory route. Her studies helped to establish an incubation period of two to three weeks with most infections. At present we think of this as an infection of closed population groups, particularly those in university complexes, boarding schools, institutions, and military installations.

Clinical Manifestations

Murray and his associates¹⁰ have written a good review, with some 112 references, of the protean manifestations of mycoplasma pneumonia. In times past we would have referred to the nonrespiratory manifestations listed in Table 1 as complications, but as we began to understand the pathophysiology of this systemic infection, we recognized that at least some of them result from spread of the infectious process to a nonrespiratory system. Some of these clinical manifestations may represent a hypersensitivity reaction, since such patients do have circulating immune complexes. The phenomenon of cold hemagglutination, a test performed with the patient's own red cells and serum, is attributable to an autoantibody apparently stimulated by the infectious agent. For a long time it has been known that many of these patients have a positive Coombs' test, some with associated hemolytic anemia. Many also show false-positive serological tests for syphilis. Thus, there are many observations to suggest that many of the nonrespiratory manifestations are the result of an immune-complex disorder.

The upper respiratory symptoms, with the exception of the ear symptoms, are uncommon. Many patients have red throats with "cobblestoning" of the pharynx as seen with lymphoid hypertrophy, but it is unusual to see a true exudate. The myringitis, described as bullous, was noted in volunteer studies; only occasional pa-

tients will display vesicles on their eardrums without an intense otitis media.

Pneumonia is the most commonly recognized respiratory manifestation of *Mycoplasma pneumoniae* infection. Perhaps the greatest number of patients with lower respiratory symptoms have only an acute but persistent and worrisome bronchitis. It is not unusual to have house officers, from whom we have some of our reference isolates, play "musical antibiotics" as they attempt to hasten the often slow healing process. As the bronchitis can result in a denuding of the bronchial epithelium such as occurs in severe influenzal infection, it will not respond to antibiotics, cough suppressants, or other supportive measures, but given enough time for healing of the respiratory membrane, it is self-limited. It was brought out in this case that although the patient was not very ill it took some three weeks before the development of x-ray evidence that the infiltrate was regressing. Although the fever and other constitutional symptoms characteristically resolve within a matter of seven to ten days, in many instances the low-grade bronchitic symptoms of cough and scattered rhonchi can persist for many weeks. The slowly resolving infiltrate is a problem in older patients where the possibility of neoplasia or other serious affliction must come under consideration. Although it was previously thought that pleural effusion was rare, many small effusions can be found by roentgenograms made in the lateral decubitus position. The causative agent has never been isolated from this supposedly infectious pleural fluid, suggesting that the effusion is "reactive."

Pulmonary abscess has been described rarely in mycoplasmal pneumonia. Experimental histological data established the inability of these organisms to produce liquefaction necrosis of lung parenchyma, which probably explains the infrequency of abscess formation.

The hematologic manifestations can be striking; life-threatening hemolytic anemias have been observed. Very high titers of cold agglutinins from these patients imply an autoimmune hemolytic mechanism secondary to sludging in the peripheral circulation, particularly in a cold environment.

Gastrointestinal symptoms are somewhat nonspecific, but some patients have an elevation of hepatic enzymes in the serum with a "viral hepatitis" syndrome. When individuals with this infection do not have localizing respiratory signs they are often thought to have influenza. Polyar-

thritis is described occasionally, and pericarditis may be manifested as a rub, but significant effusions with tamponade have not been reported. Electrocardiographic features of "pericarditis" are occasionally recognized. If congestive heart failure is present it is usually difficult to exclude other causes.

The most severe dermatologic manifestation is erythema multiforme, the Stevens-Johnson syndrome, which may prove fatal, and although glucocorticoids will suppress this syndrome, it is not helped by the usual appropriate antibiotic treatment. We reported one of the early experiences with this life-threatening complication in an individual who proved to have *Mycoplasma pneumoniae* infection.¹¹

Almost all of these patients have a cough, and it is difficult to say whether headache in a given

TABLE 2
CLINICAL CHARACTERISTICS OF MYCOPLASMA PNEUMONIAE PNEUMONIA*

	Source and Percent				
	Biberfeld et al. [6] (109 cases)	George et al. [7] (90 cases)	Grayston et al. [8] (200 cases)	Mufson et al. [9] (175 cases)	Feizi et al. [10] (40 cases)
Symptoms and Signs					
Symptoms					
Fever					
(>38.9°C)	100	50	74	72	...
Chills	73	65	58	78	...
Headache	72	40	64	84	25
Cough	100	95	100	93	75
Purulent					
sputum	...	20	49	...	18
Hemoptysis	...	5	...	...	2
Chest pain	...	30	2	42	...
Sore throat	41	25	53	53	25
Rhinorrhea	17	25	25	49	40
Earache	...	2	35	...	15
Malaise	...	40	89	74	60
Anorexia	...	...	...	36	25
Nausea/ vomiting	44	...	29	...	15
Diarrhea	...	...	16	...	12
Myalgias and arthralgias	...	20	...	45	15
Signs					
Rales	82	60	...	84	...
Pharyngeal erythema	57	...	...	12	...
Cervical adenopathy	28	40	...	18	19
Myringitis	...	...	...	...	12
Rash	...	...	16	...	28

*From Murray et al¹⁰ with permission.

case is caused by the coughing or whether a true encephalitis exists. The spinal fluid on occasion shows a low-grade pleocytosis but organisms have not been isolated from this fluid. *Mycoplasma pneumoniae* has been isolated from brain tissue but only in patients with overwhelming infection. Generalized lymphadenopathy and splenomegaly are unusual. Pediatricians at the University of Florida have reported no increase in the incidence of infection with *Mycoplasma pneumoniae* in patients with sickle-cell anemia but rather a great increase in its severity with life-threatening complications.¹²

Table 2 reviews the symptoms and signs in patients with *Mycoplasma pneumoniae* pneumonia as published from major centers around the world. There is considerable variability in the manifestations in different populations and geographic locations, and no apparent specificity of the various syndromes. Generalizing, this is a febrile respiratory syndrome associated with an atypical pneumonia which in the absence of clinical signs of pneumonia is often undetected unless a routine chest radiograph is made. Significant pulmonary infiltrates in the absence of the usual physical findings of bronchopneumonia are characteristic of atypical pneumonia.

On follow-up examination most patients will eventually develop rales and some actually manifest moderately severe bronchospasm. *Mycoplasma pneumoniae* is occasionally the cause of an acute exacerbation of bronchitis in patients with chronic obstructive pulmonary disease. Also, asthmatics occasionally experience a flare-up of bronchospasm during an infection by the *Mycoplasma*.

The Organism

There are many mycoplasma species which are culturable from the throat, probably as frequently as α -hemolytic streptococci. The only respiratory disease association, however, is with *Mycoplasma pneumoniae*, the other species acting only as anaerobic commensals.

On agar surfaces these organisms can be visualized only by magnification with a hand lens. Their ability to pass filters selective for bacteria is explained by the infectious particle or "mycoplasmion" being the size of a myxovirus, and the agar-visible component being colonies composed of millions of mycoplasmions. Because of its spherical shape *Mycoplasma pneumoniae* grows into agar and requires block

sectioning for serial passage. Most mycoplasmata that are found in throat cultures have the so-called fried egg morphology, and only the colony of *Mycoplasma pneumoniae* has a solitary spherical shape.

Because of its plasticity, having no cell wall, *Mycoplasma pneumoniae* has, until recently, defied ultrastructural study by virtue of displaying so many shapes in electromicrographs. Obviously antibiotics such as penicillin, whose effectiveness is on cell-wall components of microorganisms, are ineffective in treating this organism. In fact, penicillin is added to specimens of respiratory secretion for mycoplasmal cultures to eradicate Gram-positive bacterial contaminants ordinarily present in the throat. A common clinical picture in infection with *Mycoplasma pneumoniae* is that of a patient with pneumonia who was given penicillin with absolutely no therapeutic response.

Cold Agglutinins

Although the heterophilic cold agglutinin is nonspecific, it is a form of autoagglutination peculiarly associated with this infection. False-positive and false-negative tests are often encountered,¹³ but the higher the cold-agglutinin titer, the more likely the patient is to have *Mycoplasma pneumoniae* infection. The positive bedside cold-agglutinin screen described in this case indicates a titer of 1:64 or above.¹ We all normally have cold agglutinins in our serum, but these are of low titer and of a different immunohematologic specificity than those seen in association with mycoplasma infection. Although a titer of 1:40 is presumptively positive, greater significance is attached to fourfold or greater rises in the titer.

Many antibody systems are active in *Mycoplasma pneumoniae* infection. The earliest rise in antibodies is observed in systems composed of macroglobulins (IgM), such as the cold agglutinins and warm hemagglutinins specific for this microorganism. Later, complement-fixing antibodies, predominantly 7S and growth-inhibiting antibodies, develop, and these persist longest; they are the better markers of prior *Mycoplasma pneumoniae* infection in prevalence surveys.

Therapy and Prophylaxis

Controlled clinical trials have established the efficacy of tetracycline for decreasing fever,

(Continued on page 44)

EKG of the Month

W. BARTON CAMPBELL, M.D.

An 88-year-old man with a long history of chronic obstructive pulmonary disease and pedal edema was admitted for severe shortness of breath. His medications included digoxin, diuretics and a theophylline preparation in unknown doses. On examination he was tachypneic, with a respiratory rate of 30/min, the pulse was regular at 130/min, and blood pressure was 120/80 mm Hg. No rubs, murmurs or gallops were audible. He had scattered wheezes and rhonchi and a 3+ pedal edema. The digoxin level was 2.1 ng/ml. The theophylline level was 13 μ g/ml. Potassium was 4.2 mEq/liter. An electrocardiogram was obtained (Fig. 1).

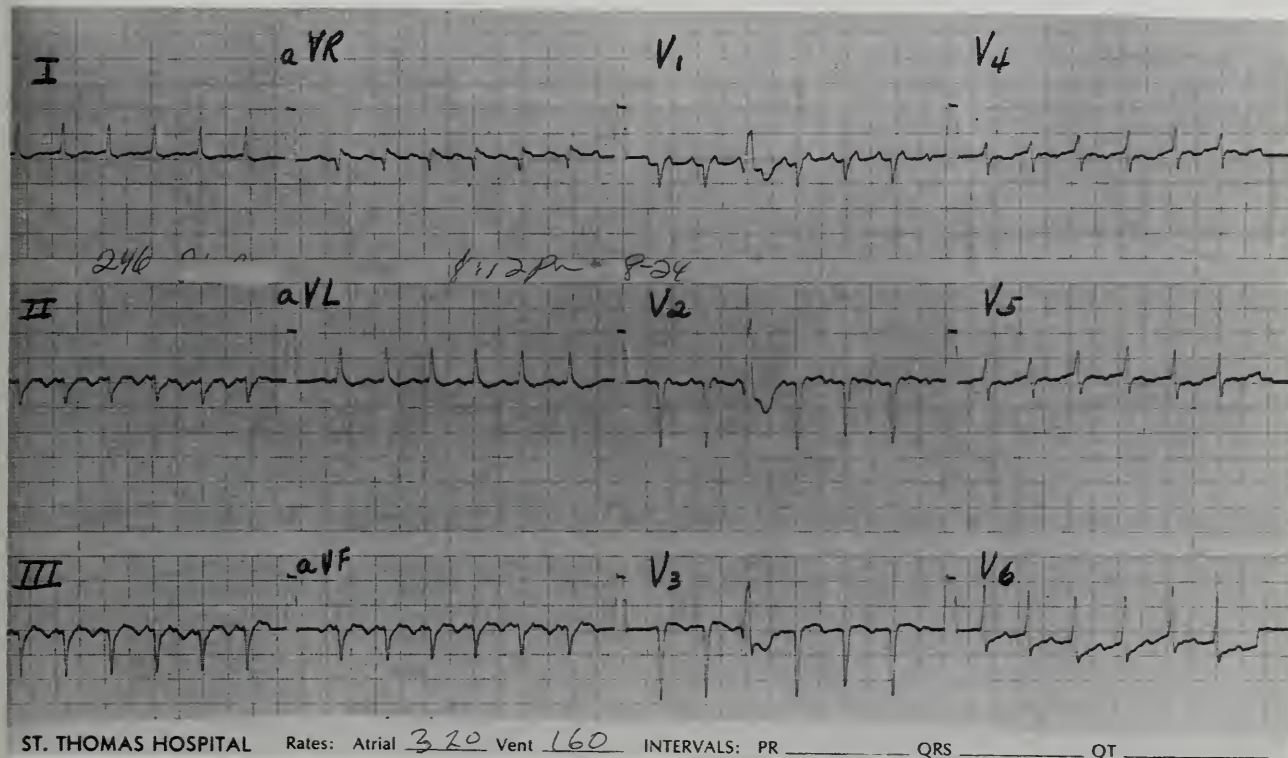


Figure 1

Discussion

This tracing shows a rapid, regular ventricular rate at 160/min. The axis is leftward with a prominent S wave in standard lead II and R waves in aVL which are taller than the R wave in standard lead I. There is poor R wave progression in V₁ through V₃. Nonspecific ST-T wave changes are present with inverted T waves in II, III, aVF, V₃, V₄, and V₅. The J point is depressed in V₆. A single premature ventricular contraction is noted in leads V₁, V₂, V₃ (which are obtained simultaneously).

Atrial depolarization is best seen in V₁. In this lead it can be seen that the atrial rate is actually twice the ventricular rate (320/min). The "flutter waves" can be identified immediately following the QRS complex and preceding the QRS complex by an interval of 0.15 seconds. This tracing shows atrial flutter with a 2:1 ventricular response. Carotid sinus massage in this patient resulted in slowing of the ventricular response to 4:1 but the atrial rate was unchanged.

Atrial flutter is often characterized by a "saw-tooth" appearance of the flutter waves which are usually inverted in leads II, III and aVF. In this tracing the "flutter waves" are of low amplitude in the inferior leads, apparently because of the

From the Department of Cardiology, St. Thomas Hospital, Box 380, Nashville, TN 37202.

prominent T waves.

The rate in atrial flutter is usually around 300 and in an adult is rarely less than 250 or more than 350. Faster rates require differentiation from atrial fibrillation while slower rates are more in the range associated with atrial tachycardia. A 2:1 ventricular response is most commonly seen in untreated atrial flutter and therefore a ventricular rate in the range of 150/min should raise the question as to the presence of this mechanism. Every other flutter wave is frequently hidden in the QRS complex and an erroneous diagnosis of sinus tachycardia or atrial tachycardia is frequently made. In such instances vagal stimulation is often helpful in distinguishing these conditions by creating temporary prolongation of the RR interval due to the development of 3:1 or 4:1 conduction. A common type of vagal stimulation is carotid sinus massage, but it should not be employed until one has first ascertained the presence of carotid pulses bilaterally and listened carefully to be sure there are no carotid arterial bruits. Atrial flutter is at times paroxysmal. It is rarely a stable rhythm and usually reverts to either atrial fibrillation or sinus

rhythm in a relatively short time.

Digitalis is helpful in slowing the ventricular rate. Antiarrhythmic agents such as procainamide, quinidine or disopyramide frequently increase the ventricular response and may result in a 1:1 conduction. These medications should not be given unless the ventricular rate is adequately controlled. In the absence of preexcitation, fever or other metabolic problems, the ventricular response is the best guide to adequacy of digitalization. Digoxin levels in the "toxic" range may be necessary for adequate response, and under the influence of digoxin and quinidine therapy atrial rates often slow considerably prior to conversion to sinus rhythm. This patient had resolution of atrial flutter when placed on increased doses of digitalis followed by quinidine.

FINAL DIAGNOSIS: (1) Atrial flutter with 2:1 ventricular response; (2) single premature ventricular contraction; (3) nonspecific ST-T wave changes; (4) left axis deviation secondary to "left anterior hemiblock"; (5) poor R wave progression V₁ through V₃ (often seen in chronic obstructive lung disease).

Medical Grand Rounds . . .

(Continued from page 42)

physical findings of pneumonia, pulmonary infiltration by roentgenogram, and length of hospital stay. In vitro studies as well as clinical investigations have suggested erythromycin as an effective antibiotic treatment of *Mycoplasma pneumoniae* infection. For a patient who is quite ill with bronchopneumonia and who obviously may have pneumococcal infection but has features suggesting atypical pneumonia, I would recommend erythromycin as opposed to tetracycline because of the frequency of tetracycline-resistant pneumococci. One can adequately treat the most common bacterial pneumonia in this manner as well as the most common mycoplasmal atypical pneumonia syndrome.

Vaccines of killed organisms for the prevention of infection with *Mycoplasma pneumoniae* in closed populations have been only partially successful. Recently a live vaccine made of temperature-sensitive mutants has been under investigation. These microorganisms will grow in the lower temperature of the nasal chambers and evoke an appropriate local and systemic antibody response, yet not produce bronchopneumonia

since the agent dies at the higher temperatures of the lower respiratory tract.

REFERENCES

1. Griffin JP: Rapid screening for cold agglutinins in pneumonia. *Ann Intern Med* 70:701, 1969.
2. Peterson OL, Ham TH, Finland M: Cold agglutinins (autohemagglutinins) in primary atypical pneumonias. *Science* 97:167, 1943.
3. Eaton MD, Meiklejohn G, Van Herick W: Studies on the etiology of primary atypical pneumonia. *J Exp Med* 79:649, 1944.
4. Liu C, Eaton MD, Heyl JT: Studies on primary atypical pneumonia. II. Observations concerning the development and immunological characteristics of antibody in patients. *J Exp Med* 109:545, 1959.
5. Marmion BP, Goodburn GM: Effect of an organic gold salt on Eaton's primary atypical pneumonia agent and observations. *Nature* (London) 189:247, 1961.
6. Chanock RM, Hayflick L, Barile MF: Growth on artificial medium of an agent associated with atypical pneumonia and its identification as a PPLO. *Proc Nat Acad Sci* 48:41, 1962.
7. Chanock RM, Rifkind D, Kravetz HM, et al: Respiratory disease in volunteers infected with Eaton agent: A preliminary report. *Proc Nat Acad Sci* 47:887, 1961.
8. Alexander ER, Hjordis MF, Kenny GE, et al: Pneumonia due to *Mycoplasma pneumoniae*. Its incidence in the membership of a co-operative medical group. *N Engl J Med* 275:131, 1966.
9. Foy HM, et al: Epidemiology of *Mycoplasma Pneumoniae* infection in families. *JAMA* 197:859, 1966.
10. Murray HW, Masur H, Senterfit LB, et al: The protean manifestations of *Mycoplasma pneumoniae* infection in adults. *Am J Med* 58:229, 1975.
11. Katz HI, Wooten JW, Davis RG, et al: Stevens-Johnson Syndrome. Report of a case associated with culturally proven *Mycoplasma pneumoniae* infection. *JAMA* 199:504, 1967.
12. Shulman ST, Bartlett J, et al: The unusual severity of mycoplasmal pneumonia in children with sickle-cell disease. *N Engl J Med* 287:164, 1972.
13. Griffin JP, Crawford YE: *Mycoplasma pneumoniae* in primary atypical pneumonia. *JAMA* 193:1011, 1965.

Radiology Case of the Month

THOMAS J. DEMPSEY, M.D. and RANDALL L. SCOTT, M.D.

A 59-year-old man presented with a six-month history of watery diarrhea and associated weight loss. Physical examination was negative except for a soft rectal mass. Pertinent laboratory findings included a serum potassium of 2.8 mEq/liter. One spot film and one overhead film from a barium enema examination are reproduced below (Fig. 1). What is your diagnosis?

- (1) Retained fecal material
- (2) Villous adenoma or villous adenocarcinoma
- (3) Adenomatous polyp
- (4) Adenocarcinoma of the rectum



Figure 1. Two representative films from a barium colon examination demonstrating a persistent, multilobular filling defect in the rectosigmoid area.

From the Department of Radiology, University of Tennessee Center for the Health Sciences, 865 Jefferson Ave., Memphis, TN 38163.

Radiographic Findings

A persistent 5-cm to 6-cm filling defect was seen in the rectum on filled barium enema examination. The mass had irregular margins and there were linear streaks of barium within the mass. At fluoroscopy, the mass was sessile, pliable and soft; barium flowed freely past the mass, and the remainder of the colon was normal. Although retained fecal material can be quite adherent to the bowel wall, it would be most unusual for such a large amount of fecal material to remain fixed to palpation at fluoroscopy. In addition, except for the cecum the remainder of the colon appeared relatively free of fecal material.

Adenomatous polyps are the most common neoplastic polypoid lesions of the colon, representing approximately 90% of such lesions. They may occur anywhere in the colon but are most commonly seen in the distal third of the colon and in the first portion of the ascending colon. The incidence of all polyps found by the Welin group of Malmo, Sweden,¹ who pioneered the double contrast barium enema examination, was 12.5%. The distribution was as follows: rectum, 42%; sigmoid, 26%; left colon, 15%; transverse colon, 13%; and right colon, 4%. Most (75%) are less than 1 cm in diameter and most are pedunculated.² Radiologic criteria for a benign adenomatous polyp include a smooth surfaced, sessile mass less than 1 cm in size or a pedunculated mass less than 2 cm with no interval growth on serial barium colon examination. Additionally, the bowel wall is smooth at the site of origin.³ The mass in this case is larger than 4 cm, sessile, and pliable, with barium within the interstices of the mass.

Adenocarcinoma of the rectum is classically described as an annular or "napkin ring" type of carcinoma producing early colonic obstruction. Another morphologic type of colonic carcinoma, described as polypoid carcinoma, occurs most commonly in the right colon and presents with gastrointestinal bleeding and anemia.³ It allows the barium to flow without obstruction to the cecum. An annular or polypoid carcinoma does

not characteristically exhibit streaks of barium within the mass, and in addition would appear rigid and fixed at fluoroscopy due to transmural infiltration. The lesion in this case is soft and pliable, sessile, larger than 4 cm in diameter, and demonstrates barium streaks trapped within the mucosal fronds of the tumor, findings quite characteristic of villous adenoma of the colon.

Discussion

Villous adenomas are relatively rare lesions comprising only 2% of all colonic tumors. They occur most often in the sixth decade, with no sexual predilection. They appear most commonly in the rectosigmoid and are classically described as a large, frond-like mass, although 10% are pedunculated.⁴ The histologic appearance of a villous adenoma is an overgrowth of mucosal epithelial cells, the majority of which are mucus secreting goblet cells, arranged on narrow papillary fronds. The mucosal nature of the lesion is responsible for the pliability and softness of the tumor at fluoroscopy. The muscularis mucosae is uninvolved unless there has been malignant degeneration to villous adenocarcinoma. The mucus secreted by the goblet cells in this tumor is rich in potassium, sodium and chloride; several liters of fluid may be lost per day, resulting in severe fluid and electrolyte depletion. This is the etiology of the watery diarrhea and hypokalemia seen in the current case. Although the villous adenoma is not a malignant tumor, 40% may undergo malignant degeneration.² Resection is the treatment of choice.

ANSWER: (2) Villous adenoma or villous adenocarcinoma.

REFERENCES

1. Welin S, Welin G: *The Double Contrast Examination of the Colon. Experiences with the Welin Modification*. Georg Thieme Verlag, Stuttgart, 1976.
2. Robbins SL: *Pathologic Basis of Disease*. Philadelphia, W.B. Saunders, 1974, p 963.
3. Dreyfuss JR, Janower ML: *Radiology of the Colon*. Baltimore, Williams and Wilkins Co, 1980, p 403.
4. Margulis AR, Burhenne HJ: *Alimentary Tract Roentgenology*. St. Louis, C.V. Mosby Co, 1973, p 1053.



GEORGE A. ZIRKLE, JR.

**president's
page**

The HMO Bureaucracy

In 1973 the federal government passed the Health Maintenance Organization (HMO) Law. In 1975 it began to spend large sums of money and has done so in increasing amounts ever since. In all, \$240.3 million has been spent setting up an HMO bureaucracy.

The government has proven that it knows how to create a mass of paper in the form of studies, charts, and reports. It has proven that it can set up offices and hire expensive personnel to create even more studies and reports.

The government has proven, with unlimited amounts of taxpayer dollars at its disposal, it can successfully create more bureaucracy.

The \$240.3 million, one assumes, does not include the salaries of these high-priced chart makers, nor the cost of the paper they use, the office space they occupy, or the travel cost they incur flying around the country promoting the HMO system. Nor, one presumes, are the costs of the promotional programs included—the expensive advertising campaigns, etc.

If the truth were known, the real cost to the taxpayers for this HMO bureaucracy probably far exceeds—perhaps doubles or triples—the published figure of \$240.3 million.

In spite of all these millions, the federal government has not proven that more people receive health care than before, or that more people receive *better* health care than previously. The only safe assumption one can make is that more people receive a different form of health care.

That assumption, plus the creation of more government jobs (none of which directly provides health care to anyone), is about all one can conclude that American taxpayers have received from their hard-earned and easily spent dollars.

What remains to be proven in the long run is whether savings bragged on by the HMO will be wiped out later in dollars spent on health care that should have been given now, but were postponed or *overlooked* in the rush to save money and make the number look good. Hopefully, under the Reagan administration, government funding of HMOs in direct competition with private practitioners will cease. All of us who have started the practice of medicine from scratch will appreciate equal opportunity for all.

Sincerely,

PRESIDENT

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JANUARY, 1981

the "we" is collective, editorial, or just imperial) think blue a restful color. At least we will have the same color every month. Some state journals change color with each issue. Some have black and white pictures on the front, and a couple have a color photograph. Some even have original art. They obviously have more money than we do. We will stay blue, at least for a while.

For a long time—ever since I became editor, in fact—I have been trying to get the ad off the cover. I was promised the run of the place, and told I could do anything I pleased with the *Journal*—except that. The reason was—you guessed it—money. That ad on the cover commanded a premium, and with rising costs, and particularly with the falling ad income which soon followed, we were ill prepared to remove it.

At one time Eli Lilly and Company, a constant and continuing supporter of state journals, had an ad on the cover of almost every one of them. One by one they dropped off and the *TMA Journal* remained for several years almost the last bastion. Now at last *our* cover is pristine. The *Journal*, its editor, and the staff take this opportunity to extend their thanks to Eli Lilly and Company, who is still with us, along with all the other advertisers who have stuck with the state journals when so many others were pulling out for what they considered the greener pastures of junk mail. I want you, our readers, to know how much they mean to us, and if you like the *Journal*, how much they mean to you, too. Read their ads! Better still, use their products!

Changing anything is hard, and changing anything in a publication is doubly hard because it disturbs habit patterns. But changing the cover—well, that's in a class by itself. It can even disturb the editor's sleep—it didn't, but it could. I got a lot of input from our colleagues, from the staff, and from disinterested observers. (I may catch a lot of flack from the same sources.) A few wanted it to stay red because it has always been that way. (It hasn't.) A few wanted it brown, like our anniversary issue. The only thing constant about the advice I got was that none of it was the same. In the end, the decision was the editor's. If you don't like it, blame me. If you do, the converse applies.

I do not necessarily think we now have the perfect cover, but you are stuck with this one at least for 1981, as it would seem folly to change again in mid-volume. But changes are not physically difficult, and we may diddle with it some,

editorials

Something Old, Something New, Something Borrowed— Something Blue

You can always find the *TMA Journal* in a stack because it's red. Right? Wrong!

But it's always been red. Right?

Wrong!

It used to be green. In fact, it was once white.

For the time being it is blue—not psychologically, but physically. We (I am not sure whether

later. The hardest thing to change is the type, because if we change it on the cover, we also have to change a lot of things inside. Otherwise, we can fool around with it to our heart's content.

My heart's content right now is to leave it alone for a while. And after all, the boss may not always be right, but he *is* always the boss.

J. B. T.

Thoughts for a New Era

The fear of God is the beginning of wisdom.
Proverbs 9:10

Back in the early days of the civil rights movement when the clergy was getting involved in various ways, some less than godly, a friend of mine, and a real friend of civil rights if not of the movement, remarked that the job of a preacher is to preach, and when he leaves the pulpit, he is liable to become dangerous.

The other day I saw a news item about a religious group in southern Kentucky whose members handle snakes because the good book says the followers of Jesus can handle snakes and not be harmed. But it does not say they should, and it says elsewhere not to tempt God. At the same time, those good people believe God is in control of both their lives and the snakes, and this is their way of showing the world it is so.

In case you care, this is not a theological dissertation. Not only may the clergyman be dangerous out of the pulpit, but the converse also applies, which is that amateurs had best leave theology alone. As the Bible amply demonstrates, the devil is the cleverest and most articulate of theologians, and he can confuse even the professionals. But you do not have to be a theologian to recognize that, assuming one accepts God as fact and not fiction, there are three ways of viewing His relationship to His creation. The first is that He is simply "The Force" — a power underlying the universe, the One who created the universe and its laws and then left it to roll along on its own. The second is that God not only created the universe, but also sustains it and is in control of its destiny; and finally, third, that He is not only in control of His universe, but that He is interested in individuals, and at their beckoning will insert Himself into their lives as well.

One year ago, at the beginning of this decade,

I suggested that not years but events form the fabric into which our memories are woven. This present decade will certainly be remembered as a new era, but rather than beginning with January, 1980, it started November 4, when the American people in their wisdom decided it was time for a change, and swept Washington clean. There was jubilation in some quarters and gloom and anxiety in others, but everyone recognized that for better or worse, come January things would not be — could not ever be — the same.

I am one of those who believes God has not abdicated His throne as King of His universe. To believe that, though, one must also believe God judges the nations. This one has been singularly blessed, and it is hard to see how anyone could think we deserve it. My admonition for this first year of the new era, this Year of Our Lord 1981, the second of this decade, is that our goal not be to get what we think we deserve, but to deserve what we have been given.

We might then even continue to be blessed!

J. B. T.

Smash! Crinkle! Crunch!

Remember the old Rice Krispies ad, "Snap! Crackle! Pop!"? Well, those words are pretty descriptive, and I could have used them as the title for this editorial, but I thought the ones I picked instead were a little more violent, and therefore more appropriate.

Those aren't Rice Krispies you're listening to. They're the bones of your infant daughter (or son) caught between mama and the dashboard as you cleverly turn your two-ton (half-ton?) gas guzzler into a bridge abutment. You and mama get out of the mass of twisted steel and shattered glass OK, but what mama now holds in her arms is a bowl full of jelly.

Gross? Sure it is. But tell me something funny or pleasant about an automobile wreck.

Three years ago, as the result of a long and intensive campaign mounted by Tennessee pediatricians and led by Bob Sanders, a Murfreesboro pediatrician and Rutherford County Health Officer who fathered the idea, our legislature passed the Tennessee Child Passenger Protection Act, which has become a model for states across the country. But just before passage, an amendment slipped by, and with the bill the

"Babes in Arms" (colloquially, and appropriately, termed by our pediatric colleagues and law enforcement officers as the "Child Crusher") amendment also became law.

Folks just naturally—in the good ole US of A particularly—don't like to be told what to do, and in our overregulated society telling them *their* children have to have proper restraints while riding in *their own* automobile was just a little too much. So passage of the child restraint law was an uphill battle waged for six years before the law was finally enacted.

Because it appeared the bill might fail again, its legislative backers accepted an amendment to exempt children held firmly (?) in the lap of an older passenger. After all, what place is safer than mama's arms?

In a moving automobile, practically any place. At 30 miles an hour, with a sudden stop little hundred pound mama, unrestrained, becomes a ton and a half load dumped on her helpless infant. Sandow could tolerate it, but few infants are built like Sandow. If mama is restrained, chances are she can't hang onto the 300-pound projectile her infant becomes, and it puts a sizeable dent in the shiny shatterproof windshield—not to mention the soft little skull. Since the law went into effect, ten children have died needlessly on Tennessee highways as a result of the "child crusher" amendment.

When the legislature convenes later this month, the Tennessee chapter of the American Academy of Pediatrics and the Tennessee Pediatric Society, in conjunction with the Tennessee Department of Safety, will present it with a bill to repeal this dangerous amendment. There is, as there always has been, significant opposition. You have influence on legislators and on patients who have influence on legislators. You used it before to help pass the original act. Use it again.

The life you save may be your own—child's or grandchild's.

J.B.T.

Toxic History

During the Spanish-American War in 1898, of 107,000 American men under arms 15,000 died of typhoid fever. This was 86% of all deaths from infectious disease. One of the largest of the epidemics occurred in the encampment at

Chickamauga Park, near Chattanooga, where the attack rate was 30%.

Several factors were involved in the epidemic, and most were foreseen by the medical officers, but at that time the medical officers could only advise the line officers of hazards, and most of those officers still labored under the widely held delusion that disease was caused by miasms or by the inherent evil of a particular site. Window screens were not yet in general use, and as it was summer, flies tracked disease-filled material from the open pit latrines to the nearby mess halls. As the thin soil did not allow percolation, when the latrines were filled in, excreta simply rose to the top. Water was drawn from wells contaminated from boots which had recently walked about those areas, and excreta was finally washed down the hillsides into Cave Springs Branch, or seeped through cracks in the limestone and flowed along pores in the limestone shelf. All of it eventually wound up in Chickamauga Creek at a point slightly above the main intake of the camp's water supply.

Tennessee abounds in limestone, which is good for spelunkers and the paving industry, but not so good for some other things. Where there is limestone the soil is usually thin and the limestone affords cracks and channels through which water can flow for long distances underground.

There is concern that toxic wastes buried near Chattanooga are seeping into Chattanooga Creek, which makes its polluted way into the Tennessee River. When I heard about it, my reaction was, "So what else is new?"

Those who are ignorant of history are doomed to repeat it.

J.B.T.



John L. Ledbetter, Jr., age 63. Died November 15, 1980. Graduate of University of Tennessee School of Medicine. Member of Montgomery County Medical Society.

Claud H. Taylor, age 71. Died November 4, 1980. Graduate of University of Tennessee School of Medicine. Member of Bradley County Medical Society.

new members

The JOURNAL takes this opportunity to welcome these new members to the Tennessee Medical Association.

CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY

Samara S. Bellam, M.D., Hixson
Ramamohana R. Bellam, M.D., Hixson

FENTRESS COUNTY MEDICAL SOCIETY

R. Douglas Smith, M.D., Jamestown

GREENE COUNTY MEDICAL SOCIETY

Richard J. Aasheim, M.D., Greeneville
Joseph W. Austin, Jr., M.D., Greeneville
Kevin Bonner, M.D., Greeneville
Carol Dewey, M.D., Greeneville
Kenneth M. Mathews, Jr., M.D., Greeneville
E. Brad Strange, M.D., Greeneville

HENRY COUNTY MEDICAL SOCIETY

Sam McCaskill, Jr., M.D., Paris

NASHVILLE ACADEMY OF MEDICINE

Phillip M. Caple, Sr., M.D., Nashville
Deborah A. Manning, M.D., Nashville
Paul E. Mobley, III, M.D., Madison
James L. Nash, M.D., Nashville
Susan L. Radecky, M.D., Nashville
Sisir K. Sen, M.D., Nashville
J. Gregory Sikes, M.D., Nashville

SCOTT COUNTY MEDICAL SOCIETY

David Grigsby, M.D., Oneida

SULLIVAN-JOHNSON COUNTY MEDICAL SOCIETY

Lawrence R. Morris, M.D., Kingsport

WASHINGTON-CARTER-UNICOI COUNTY MEDICAL ASSOCIATION

Huberto Coto, M.D., Johnson City
Gail H. Gallemore, M.D., Johnson City

personal news

Dorothy Brown, M.D., Nashville's first black female surgeon, has received the third annual M. G. Ferguson Distinguished Community Service Award.

Duane C. Budd, M.D., Johnson City, was elected the 1981 president of the Tennessee Academy of Family

Physicians at the Academy's 32nd annual assembly in Gatlinburg. Arden J. Butler, Jr., M.D., Ripley, was elected president-elect.

John H. Burkhardt, M.D., Knoxville, is the new vice chairman of the AMA Judicial Council.

Haskell Fox, M.D., Greeneville, was recently hailed as "Mr. Greeneville Hospital" when the hospital's administration presented him with a plaque "in appreciation for 46 years of dedicated service to Greeneville Hospital and our community."

Charles W. Gross, M.D., Memphis, has been elected first vice president of the American Academy of Otolaryngology—Head and Neck Surgery, effective January 1981.

B. D. Hale, M.D., Brownsville, has been elected president of the Tennessee Public Health Association.

Burton M. Rudolph, M.D., Knoxville, has been elected second vice president of the American Association of Clinical Immunology and Allergy.

Dan Scott, M.D., president-elect of the Memphis-Shelby County Medical Society, was reappointed to a four-year term on the Emergency Medical Services Advisory Committee by Gov. Lamar Alexander. The 13-member committee advises the state Department of Public Health on rules and regulations for the operation of emergency medical services in Tennessee.

Thurman Shipley, M.D., Cookeville, was named Tennessee Family Physician of the Year by the Tennessee Academy of Family Physicians at the Academy's 32nd annual assembly in Gatlinburg.

John B. Thomison, M.D., Nashville, is the new chairman of the AMA Council on Continuing Physician Education.

The following TMA members have been named to positions by the American Medical Association Board of Trustees: *Pervis Milnor, Jr., M.D., Memphis, is a member of the Advisory Committee on Graduate Medical Education. James W. Pate, M.D., Memphis, is a member of the Residency Review Committee in Surgery. John A. Shively, M.D., Memphis, is a member of the Residency Review Committee in Pathology.*

The following TMA members have been named Fellows of the American College of Chest Physicians: *Joel E. Avery, M.D., Chattanooga; Jack D. Hixson, III, M.D., Chattanooga; Arnold R. Hudson, Jr., M.D., Knoxville; and Alin Khandekar, M.D., Memphis.*

medical news in tennessee

Dr. James Hunt Is Elected Chancellor at UTCHS

Dr. James C. Hunt has been elected chancellor of the University of Tennessee Center for the Health Sciences.

Dr. Hunt, who has served as dean of the UTCHS College of Medicine since July, 1978, will succeed Dr. T. Albert Farmer, Jr., as chancellor and as vice president of health affairs for UT statewide on Jan. 1. Dr. Farmer resigned in September to become chancellor of the University of Maryland at Baltimore.

Dr. Hunt said that as chancellor he will emphasize the prevention of illness in the health care, teaching, and research programs of the university instead of just the treatment of disease. He said he will continue to push for renovation of older UTCHS facilities and said that the number of faculty members will be increased by 25% over the next five years to improve the quality of care and teaching.

The new chancellor did not announce a new dean for the College of Medicine but did say the new dean "should be one of our own people." He said he expects to name the new dean by Jan. 1. "It would be very bad for that to be an interim-type function. It is important we identify a dean with due haste."

Dr. Hunt joined UTCHS after serving as chairman of the Department of Medicine at the Mayo Clinic and Mayo Graduate School of Medicine in Rochester, Minn. He is a nationally recognized expert on high blood pressure, receiving his medical degree from the Bowman Gray School of Medicine at Wake Forest University.

national news

From the AMA's Office in Washington, D.C.

Ins and Outs in Washington

From now until mid-January the most-used word in the nation's capital will be transition. Reagan people—or allegedly Reagan people—will swarm about the town with knowing looks as to who's on first base, tapping briefcases bulging with position

papers and bright new ideas for a brave new government.

To the purist, the word "interregnum" is preferable to "transition" in describing the Washington scene—for indeed there is an interval between two successive reigns, a suspension of administrative function.

Reagan said he wants his administration to "hit the ground running" when it takes office Jan. 20.

The selection of the cabinet dampened the fire of speculation about the tone and tenor of the incoming administration in this town that hasn't had any practice in dealing with a Republican from the conservative wing of the party.

Reagan has been supplied with detailed position papers on health policy from his advisory group for use in charting his administration's course next year. A transition team is working with President Carter and his aides on the transfer of power. The proposed federal budget for the fiscal year that starts next October is almost completed. And now the Reagan officials will have their whack at it. Usually a new administration doesn't do much tampering with the carryover budget.

In a move to lay the groundwork for early action, Reagan appointed six people to review the federal structure with an eye to lower level appointments and possible reorganizations. Elizabeth Dole, wife of Sen. Robert Dole (R-Kans.) and former member of the Federal Trade Commission, will handle human resources including the Health and Human Services Department, the Housing and Urban Development Department and the Department of Education.

Reagan has indicated opposition to the separate Department of Education that was established to carry out a controversial campaign pledge by President Carter aimed at wooing the votes of teachers. And there has been renewed talk about reorganizing the HHS Department in order to put more emphasis on health and less on its welfare functions.

Reagan's health advisory group, headed by William Walsh, M.D., president of Project Hope, has proposed a pool arrangement for private health insurance companies under which insurance would be made available to people whose disabilities make them uninsurable at present.

They would pay premiums which would be subsidized, if necessary, by the rest of the insured population.

Other recommendations included:

- Allowing Medicare-Medicaid beneficiaries to choose private coverage with premiums paid by the government.
- Examining the \$1-billion renal dialysis program to determine if services could be provided at less cost.
- Expanding home health benefits with an aim to reducing Medicare-Medicaid payments for hospital and nursing home care.

- Decentralizing health planning.

The thrust of the report toward easing federal regulation and encouraging a greater role for the private sector was mirrored in a report on health policies issued by the Heritage Foundation, a Washington, D.C., study group.

H₂S in Review

The Heritage Foundation, a conservative think tank with strong ties to the Reagan administration, has come up with a blueprint for future government that includes some sweeping changes in health.

The Foundation calls for examination of methods of "phasing out Medicaid and Medicare in their present form, pursuant to the development of systems relying on 'vouchers' and a more competitive private market."

Foundation President Edwin Feulner said the Foundation's "Mandate for Leadership" study, a year in the making, is a basic set of conservative policy recommendations "which I hope the Reagan administration will give its careful and serious consideration." He said the study represents the collected opinions of more than 250 experts from government, universities, think tanks, and the business and legal professions.

The author of the report on the HHS Department was David Winston, an aide to Sen. Richard Schweiker (R-Pa.).

The HHS section proposed a freeze on all HHS consulting contracts pending a full review of their usefulness, noting that the department "is very heavily dependent on such outside consultants."

It called for concentration on the role of HHS as a "'last resort,' while deregulating and enhancing the private sector's innovative capabilities."

Turning to the Health Care Financing Administration (HCFA), which runs Medicare and Medicaid, the report said HCFA has considerable difficulties managing fiscal intermediaries (e.g., insurance carriers) through which Medicare and Medicaid programs are administered. Furthermore, it finds it difficult to restrict health cost increases because of the retrospective, cost-based reimbursement system for these programs.

Immediate examination of means to improve the administration of Medicaid and Medicare was urged. Containment policy should be turned away from a controls and guidelines approach to a process of reimbursement reform, deregulation, and improved competition, according to the study.

A significant recommendation was that "attention should be given, however, to the reduction or elimination of the professional standards review organization (PSRO) program."

The Foundation study also noted that the National

Institutes of Health have been criticized for duplicating work in the private sector. "Private organizations should be encouraged to carry out more development work, reserving NIH for areas with little commercial promise. Methods could be examined of altering the tax treatment of private research to encourage private involvement in more risky, innovative fields."

The report added that "bureaucratic problems of NIH might be reduced by strengthening the director's authority to improve budgeting and planning, and by analyzing the cost structure with a view to reducing indirect costs." Another significant proposal was for a thorough review of federal involvement with health maintenance organizations (HMOs) with a possible six-month moratorium on all new program awards and extensions.

Black Blots Dropped From M and M

House-Senate conferees have deleted from the Medicare-Medicaid amendments package a majority of the provisions that had been disputed by the medical profession.

The victory for the health providers was highlighted by elimination of the controversial Senate provision that would have restricted Medicaid beneficiaries' freedom of choice of institution by allowing states to specify which hospitals beneficiaries could attend.

Advocates of the provision had claimed that states could save money by channeling Medicaid patients to lower-cost facilities, but opponents, including the AMA, warned that such restrictions raised the spectre of a two-tier system of care.

The amendments constituted the health section of the budget "reconciliation" bill Congress has been working on in an attempt to bring federal spending in line with Congress' own, self-imposed budget limitations.

The conference committee's agreement on the total budget "reconciliation" was expected to clear the way for final congressional approval. There had been a question whether Congress would be able to work out a compromise between House and Senate versions of the bill during the "lame duck" session, but the lawmakers were anxious to resolve their differences in order to avoid what would have been a shattering blow to the congressional budget process through failure to act.

One of the major provisions removed from the Medicare-Medicaid list was the proposal for sweeping changes in the way Medicare reimburses hospitals. This was the heart of the longstanding plan by Sen. Herman Talmadge (D-Ga.) to pay hospitals by groups, size and class on a prospective basis.

Another Talmadge provision dropped would have changed the criteria for determining reasonable charges for physicians' services and looked toward statewide uniformity in fee allowances. This provision also would have restructured the payment basis for hospital-associated physicians.

A controversial, administration-supported provision to boost Medicare payments for health maintenance organizations (HMOs) to 95% of the prevailing level was stripped from the measure.

Hospitals won their fight against a cost-cutting amendment that would have eliminated the current Medicare 8.5% differential payment for nursing costs.

The conferees also abandoned a proposal for liberalized conditions for reimbursement for chiropractic services, and voted down a provision for expanded payment for community mental health centers.

AMA Asks Withdrawal of Health Planning Programs

The AMA has taken strong exception to two draft documents on health planning and has asked Health and Human Services Secretary Patricia Harris to recall them immediately.

The documents outline standards and measurements to be used in evaluating health systems agencies, state health planning and development agencies, and the health planning program as a whole. While recognizing the need for federal monitoring of the program, the AMA said the two drafts "represent an unduly extensive imposition of federal standards on the health planning process."

The AMA pointed out that the proposed standards are derived from the 1978 National Health Planning Guidelines and the draft National Health Goals, neither of which yet has legal standing. "The wholesale incorporation of these guidelines and goals into a review system to establish norms, the deviation from which will subject an agency to sanctions, transforms the guidelines and goals into federally mandated requirements."

The Association stressed that planning authority and direction should be focused at the local level and suggested that any future proposals be drafted to provide greater flexibility for state and local agencies in establishing indicators to measure their progress.

Prescription Drug Abuse Warning

Contending there is a "totally inadequate" national awareness of prescription drug abuse, the Director of the National Institute of Drug Abuse (NIDA) warned the problem could reach the magnitude of alcohol and

tobacco as health hazards.

Federal officials estimated 7 million Americans use legal drugs for nonmedical purposes. William Pollin, M.D., NIDA director, said misuse of prescription drugs is insidious and shows no signs of decreasing.

Dr. Pollin spoke at a Washington, D.C., conference sponsored by the federal drug agencies in conjunction with the American Medical Association, the Pharmaceutical Manufacturers Association and the National Association of State Alcohol and Drug Abuse Directors.

Peter Bensinger, administrator of the Drug Enforcement Administration, said 250 million to 300 million dosage units are diverted each year. "A few physicians and pharmacists interested in illicit gain have caused a major national problem," he said. Federal investigators found one physician making \$200,000 a month from dealing in prescription drugs illegally, he said. One physician's desk drawer contained more than \$1 million in cash.

The government officials conceded they could not accurately estimate how much of the problem stems from crooked physicians and pharmacists and how much from theft, from "professional patients," or other means.

Joseph Skom, M.D., chairman of the AMA Committee on Dangerous Drugs, said the most important task is continuing medical education of physicians on proper prescribing. The overwhelming majority of the problem is caused by a "small minority" of physicians, Dr. Skom told the conference.

The AMA has drafted model state legislation to crack down on physician misconduct, he noted, with one-half of the states to date providing all or part of the recommended code. Dr. Skom pointed to a six-fold increase in disciplinary actions against physicians since 1971, suggesting that this has helped in the fight against prescribing abuse. The AMA believes in "firm prosecution" of guilty physicians, he said.

announcements

CALENDAR OF MEETINGS

NATIONAL

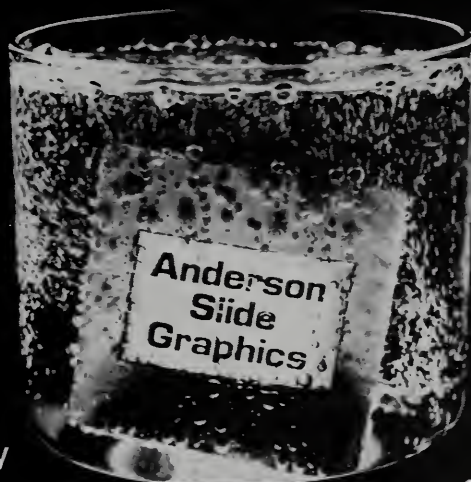
- Feb. 7-14 Neonatal and Infant Respiratory Symposium (Ohio State Univ)—Mark Resort, Vail, Colo.
- Feb. 7-14 Symposium on the Practical Management of the Infertile Couple—Elkhorn, Sun Valley, Idaho
- Feb. 8-13 Winter Skin Seminar—Given Institute of Pathobiology, Aspen, Colo.

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|-----------------|---|-------------|---|
| Feb. 11-14 | American College of Nuclear Physicians—Fairmont, New Orleans | | |
| Feb. 15-19 | American College of Psychiatrists—Doubletree Inn, Tucson, Ariz. | March 8-12 | Society of Head and Neck Surgeons and the American Society for Head and Neck Surgeons—Hyatt Regency Hotel, Phoenix, Ariz. |
| Feb. 22-25 | Southeastern Surgical Congress—Fairmont, New Orleans | | |
| Feb. 22-26 | North American Medical-Dental Association Conference—Wildwood Inn, Snowmass, Colo. | March 12-15 | American Society for Regional Anesthesia—Omni International, Atlanta |
| Feb. 22-March 1 | Mid-Winter Symposium on Practical Clinical Testing in Otology (Amer. Hearing Research Foundation)—Snowmass, Colo. | March 15-18 | Neurological Society of America—Del Monte Lodge, Pebble Beach, Calif. |
| Feb. 26-28 | American Association of Genito-Urinary Surgeons—Arizona Biltmore, Phoenix, Ariz. | March 15-21 | American Society of Contemporary Medicine and Surgery—Sheraton Twin Towers Hotel, Orlando, Fla. |
| March 1-5 | Society of Toxicology—Town and Country Hotel, San Diego | March 15-21 | American Society of Contemporary Ophthalmology—Sheraton Twin Towers Hotel, Orlando, Fla. |
| March 1-6 | American Society for Microbiology—Dallas | March 23-25 | American Society of Abdominal Surgeons—National Study Center for Continuing Medical Education, Tampa, Fla. |
| March 2-6 | International Academy of Pathology, United States-Canadian Division—Palmer House, Chicago | March 23-27 | American Roentgen Ray Society—San Francisco Hilton, San Francisco |
| March 5-7 | American Psychopathological Association—Sheraton Center Hotel, New York | March 26-29 | American Psychosomatic Society—Hyatt, Cambridge, Mass. |
| March 7-11 | American Academy of Allergy—Hilton Hotel, San Francisco | March 27-28 | AMA Hospital Medical Staff Leadership Seminar—Hyatt Regency, Peachtree Center, Atlanta |
| March 8-12 | International Anesthesia Research Society—Peachtree Plaza Hotel, Atlanta | | |

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Vermox[®]
(mebendazole)
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† Rollo, I.M.: Drugs used in the chemotherapy of helminthiasis, in Goodman, L.S.; and Gilman, A. (eds.): *The Pharmacological Basis of Therapeutics*, ed. 5. New York, Macmillan, 1975, p. 1034.

†† Miller, M.J.; Krupp, I.M.; Little, M.D.; Santos, C.: Mebendazole an effective anthelmintic for trichuriasis and enterobiasis. *JAMA* 230 (10): 1412-1414, Dec. 9, 1974.

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Febrile Seizures — Long-Term Management of Children With Fever Associated Seizures

Introduction

A Consensus Development Conference on Febrile Seizures was held at the National Institutes of Health on May 19-21, 1980. The purpose of the conference was to bring together practicing physicians, research scientists, consumers, and others in an effort to reach general agreement on the risks of sequelae in children with febrile seizures and to compare them with the potential risks and benefits of prophylaxis with anticonvulsants.

On the first two days of the meeting, a consensus development panel and members of the audience reacted to evidence presented on the following questions:

- What is a febrile seizure?
- What are the risks facing the child who has a febrile seizure?
- What can chronic or intermittent prophylaxis accomplish in reducing those risks?
- What are the potential risks of prophylaxis, using the available forms of therapy?
- What is a rational approach to management

This conference was sponsored by the National Institute of Neurological and Communicative Disorders and Stroke, in cooperation with the National Institute of Child Health and Human Development and with the assistance of the Office for Medical Applications of Research, NIH.

Members of the Consensus Development Panel were: Edwin L. Kendig, Jr. (chairperson), Virginia Commonwealth University, Medical College of Virginia, Richmond, Va.; Paul R. Dyken, M.D., Medical College of Georgia, Augusta, Ga.; Nyrma Hernandez, Epilepsy Foundation of America, Washington, D.C.; Marion C. McKee, M.D., University of Vermont and Vermont State Health Department, Burlington, Vt.; Hart deC. Peterson, M.D., New York Hospital-Cornell Medical Center, N.Y.; Nelson G. Richards, M.D., Medical College of Virginia, Richmond, Va.; Robert H. Shackelford, M.D., Duke University, Bowman Gray, University of North Carolina and East Carolina University Medical Schools, Mount Olive, N.C.; Elbert E. Smith, M.D., Kansas City, Mo.; B. J. Wilder, M.D., University of Florida College of Medicine and Veterans' Administration Medical Center, Gainesville, Fla.; Janet Wittes, Ph.D., Hunter College of the City University of New York, N.Y.

of children with febrile seizures? Which children should be considered for prophylaxis?

- Are further clinical, experimental, or epidemiologic studies necessary?

The members of the Consensus Development Panel represent the disciplines involved with treating and evaluation of management of children with febrile seizures. The physicians were nominated for their role on the panel by four specialty medical associations: the American Academy of Pediatrics, the American Academy of Neurology, the American Academy of Family Physicians, and the Child Neurology Society. The panel met following the formal presentations and discussions to examine and debate the issues, based on the evidence presented. This summary is the result of these deliberations.

What is a febrile seizure?

A febrile seizure is an event in infancy or childhood, usually occurring between three months and five years of age, associated with fever but without evidence of intracranial infection or defined cause. (A cerebral seizure is an abnormal, sudden, excessive electrical discharge of neurons [gray matter] which propagates down the neuronal processes [white matter] to affect an end organ in a clinically measurable fashion.) Seizures with fever in children who have suffered a previous nonfebrile seizure are excluded. Febrile seizures are to be distinguished from epilepsy, which is characterized by recurrent nonfebrile seizures.

What are the risks facing the child who has a febrile seizure?

Children who suffer a febrile seizure generally enjoy normal health after the episode. They are, however, at some risk in several respects. Thirty to forty percent of children who have one febrile seizure and who do not receive prophylactic therapy will experience a second. The seizure itself is frightening and frequently may be emotionally disturbing to the family. During a sei-

zure, there is, additionally, a minimal chance of physical injury. The occurrence of a second or subsequent febrile seizure does not, in itself, greatly change the risk of epilepsy.

A small percentage of children who have had a febrile seizure may have nonfebrile seizures, that is, epilepsy. Significant risk factors separate children: at high risk of developing nonfebrile seizures from those at low risk. The high risk group, for which one study showed a 13% incidence of epilepsy, is characterized by the presence of at least two of the following risk factors:

- a family history of nonfebrile seizures;
- abnormal neurological or developmental status prior to febrile seizure;
- an atypical febrile seizure, such as a prolonged or focal seizure.

Only 2% to 3% of children who have none or one of the above risk factors subsequently develop nonfebrile seizures.

The child with febrile seizures may have a neurological deficit, such as mental retardation, motor deficit, and sensory and perceptual abnormalities. It is generally believed that when present, these central nervous system (CNS) deficits have usually antedated the febrile seizures. There is no convincing experimental or epidemiological evidence that these deficits reflect neurological injury occurring at the time of the febrile seizure.

What can chronic or intermittent prophylaxis accomplish in reducing those risks?

The only risk demonstrated to be affected by therapy is that of recurrence of a febrile seizure. Numerous studies show that the risk of recurrence of febrile seizures can be reduced by the continuous daily administration of phenobarbital at appropriate dosage to achieve minimum therapeutic blood levels (about 15 $\mu\text{g/ml}$). Preliminary evidence suggests that the frequency of febrile seizures may also be reduced by the prompt administration of diazepam by rectum, or possibly other agents, at the onset of acute febrile illness. There is no evidence to suggest that phenytoin is effective in prophylaxis of febrile seizures.

Maintenance Therapy. While prolonged administration of phenobarbital is an accepted method of reduction of the frequency of febrile seizures, the long-term effects of such management are still poorly understood and require investigation. Valproic acid has been reported to

be effective; however, hepatic toxicity following the prolonged use of valproic acid has been reported. Thus, when this drug is used, liver function should be closely monitored.

Intermittent Therapy During Febrile Episodes. Intermittent use of phenobarbital administered orally at the usual recommended dosage (3-5 mg/kg) has been shown to be ineffective in promoting therapeutic blood levels. Diazepam, when administered as suppositories (not yet available in the United States), apparently is absorbed rapidly enough to provide immediate protection from subsequent seizures in a high percentage of febrile children.

There is no evidence to support the concept that prolonged therapy with anticonvulsants prevents the development of epilepsy or significant neurological deficits.

What are the potential risks of prophylaxis, using the available forms of therapy?

The potential risks of continuous prophylaxis are those predictable side effects, toxic manifestations, or idiosyncratic reactions that may be peculiar to the anticonvulsant drug selected for therapy.

Drugs currently administered on a long-term basis to prevent febrile seizures are phenobarbital, diazepam, and valproic acid and, to a lesser extent, phenytoin and carbamazepine. Phenobarbital is by far the most commonly used agent.

Side effects and toxic reactions are reported in up to 40% of infants or children receiving phenobarbital. These reactions are usually of the following types: (1) Behavioral changes—hyperactivity to extreme irritability and, rarely, somnolence. (2) Sleep pattern disturbances—prolonged nocturnal awakenings. (3) Interference with higher cortical or cognitive functions, e.g., defect in short-term memory formation, inattentiveness or decreased attention span, or defects in general comprehension.

Disturbances in behavior and patterns of sleep are not predictable. They are the cause for discontinuation of therapy in up to 25% of patients.

Animal and tissue culture studies, which are not at this time conclusive in regard to humans, raise questions as to more serious effects of phenobarbital and certain other anticonvulsant agents on the developing nervous system.

Phenobarbital is capable of enzyme induction and, therefore, may interact with other drugs.

The induction of more rapid metabolism of acetaminophen (a major antipyretic) may increase the risks of hepatotoxicity.

Phenobarbital has been used intermittently during febrile episodes to prevent recurrence of febrile seizures. In less than loading doses, this method is ineffective. When given in loading doses (10-15 mg/kg), phenobarbital produces somnolence, lethargy, and other behavioral manifestations.

Valproic acid has been shown to be an effective prophylactic agent in preventing recurrent febrile seizures. Few serious side effects and toxic reactions occur; however, gastrointestinal upset, toxic hepatitis, pancreatitis, and other side effects have been reported. Behavioral side effects are rare and disturbances in higher cortical function have not been reported. Liver function studies should be monitored periodically in patients on prolonged valproic acid therapy.

Diazepam, given by rectum, has been reported to be effective in the prophylaxis of seizures during febrile episodes. Side effects and toxic reactions have been rare, though sedation has been observed.

A report, however, did find that antipyretic therapy was not effective in preventing febrile seizures. Acetaminophen and aspirin both produce relatively prompt lowering of temperature and both are relatively free of side effects and toxic reactions.

What is a rational approach to management of children with febrile seizures? Which children should be considered for prophylaxis?

A rational approach to the management of febrile seizures should take into account that the long-term prognosis is excellent, that prophylaxis reduces the risk of subsequent febrile seizures, and that there is no evidence that prophylaxis reduces the risk of subsequent non-febrile seizures.

An initial workup of febrile seizures should include a complete history and complete pediatric and neurological examination, including characterization of the febrile illness, degree of temperature elevation, and complete description of the febrile seizure. If a CNS infection is suspected, a lumbar puncture is indicated.

The role of the electroencephalogram (EEG) in the workup of febrile seizures remains controversial. Abnormal EEGs do not reliably pre-

dict the development of epilepsy in patients with febrile convulsions.

Other studies, such as a complete blood count, measurement of levels of serum electrolytes, calcium, and glucose in the blood, and skull x-rays or computerized (CT) scanning of the brain are rarely useful in the uncomplicated febrile seizure.

Febrile convulsions rarely presage complex partial seizures or other forms of epilepsy and are generally benign and self-limited.

Anticonvulsant prophylaxis in therapeutic levels may be considered under any of the following conditions: (1) In the presence of abnormal neurological development (e.g., cerebral palsy syndromes, mental retardation, microcephaly). (2) When a febrile seizure is longer than 15 minutes, or focal, or followed by transient or persistent neurological abnormalities. (3) History of nonfebrile seizures of genetic origin in a parent or sibling.

The physician occasionally may elect, in certain selected cases, to provide anticonvulsant treatment when a patient has multiple febrile seizures or when seizures occur in an infant under the age of 12 months.

When anticonvulsant prophylaxis is instituted, it is usually continued for at least two years or one year after the last seizure, whichever is the longer period of time. Discontinuation of therapy should be done slowly over a one- to two-month period.

Parents and others who are responsible in the care of young children play a key role in the prevention and management of febrile seizures. Family education and counseling should address the relatively benign nature of febrile seizures; the recognition of and management of fever; the use of antipyretic agents; medication and compliance; side effects of medication; first aid for a seizure; and when and how to seek emergency assistance, if needed.

Educational materials may be an effective means to complement the physician's efforts toward family education.

Since nurses and allied health professionals, health educators, and social workers are important in family education and counseling, they should receive adequate information in the management of febrile seizures.

Efforts should also be directed to disseminating this knowledge to the public, including day care centers, through mass media and other means.

Are further clinical, experimental, or epidemiologic studies necessary to help in answering these questions?

Certain important questions remain unanswered. Studies are needed to address these issues.

- (1) Determination of risk factors predicting an initial febrile seizure.
- (2) Continuation of the present efforts to follow into adulthood children who have had a history of febrile seizures. This followup should include exploration of any association between febrile seizures and learning disorders, epilepsy, behavior aberrations, intellectual development, and changes in the EEG.
- (3) Continued efforts to clarify the role of anticonvulsant treatment in febrile convulsions. Can evidence be obtained as to whether anticonvulsant treatment is able to:
 - a) alter the probability of developing epilepsy at some later date?
 - b) alter the probability of development of other neurological sequelae, e.g., lowered IQ?
 - c) alter psychological and behavioral characteristics?
- (4) Pharmacological Studies
 - a) What anticonvulsants are safe and effective in the chronic prophylaxis of febrile convulsions? What is the proper dosage and the therapeutic blood level?
 - b) What anticonvulsants are safe and effective for short-term prophylaxis of febrile convulsions? What is the proper dosage and the therapeutic blood level?
 - c) What are the long-term risks of the use of the above anticonvulsants?
 - d) Does phenobarbital enhance the possible carcinogenic effects of other drugs or chemical agents in humans?
- (5) Controlled study of antipyretic measures with the onset of febrile illness as a means of decreasing the risk of recurrence of febrile seizures.
- (6) Continuation of experiments of the effects of drugs on brain growth and development, utilizing animal and tissue culture techniques.
- (7) Continuation of animal experiments to clarify the effects of single recurrent seizures on brain maturation and development, utilizing both experimental animal models and kindling techniques.

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AMA Jail Program Appeals to Local-M.D. Sense of Duty

A roadblock has appeared in the AMA's hard-driving program to upgrade health care in the nation's jails—that widely acclaimed program in which many state medical associations have cooperated.

The roadblock is the imminent cutoff in funds from the Law Enforcement Assistance Administration (LEAA). The very future of this federal agency hangs in doubt.

It is up to local communities, including their medical societies, to come forth with initiatives that can help keep the jail program rolling—and thus keep often innocent inmates from being neglected.

To understand what local communities ought to do, it is essential to know what LEAA has been doing with the \$3.7 million allocated since the program's 1975 inception.

In addition to enabling the program to start, LEAA has financed the full-time, on-site technical assistance that jails have used in meeting AMA health care accreditation standards. This assistance is given by trained correctional health care specialists, and is backed by LEAA-funded training packages, films, and the like. The main effect of the funds cutoff will be a shrinkage in the personal, technical aid.

The AMA will continue its accreditation program (with the help of the 23 participating state medical associations), its efforts to expand the accreditation drive to the rest of the states, its dissemination of training materials, and its advisory and coordinative role.

But to bridge the technical-assistance gap, communities will have to draw heavily on their own expertise and ingenuity. The challenge is

civic and medical—but not financial. Various jails taking part in the AMA program have demonstrated that it can yield cost savings and certainly a greater cost effectiveness.

For one thing, a decent system of care relieves the possibly expensive threat of being sued by inmates. That threat has been growing, because recent U.S. Supreme Court decisions have made it easier to sue. Second, a well-integrated system of care, with standard in-house services and prudent arrangements with outside providers, can save costs as well as health. Medical societies can help achieve this kind of system—and have done so.

The potential economies have been—and should be—a persuasive argument for jail-care reform in communities that have been resistant, or indifferent, to it. The key argument, though, is the response that the program has already brought from so many communities, their leaders, and their health care providers.

Almost 400 jails have taken part in the program, and 272 are doing so now. Seventy-seven jails are accredited, and many more are up for accreditation or reaccreditation. Such statistics tell us that jails need not remain “the worst blight in American corrections—much worse than prisons,” as a University of Illinois criminologist recently asserted.

As medical people and medical societies, let us work to eradicate the jail-health blight wherever it is—in the spirit of the “compassion and respect for human dignity” exhorted in the AMA Principles of Medical Ethics. 

Toba J. Cohen, Director
AMA Office of Public Relations

The continuing medical education accreditation program of the TMA has full approval by the Council on Medical Education of the AMA. An accredited institution or organization may designate for Category I credit toward the AMA Physician's Recognition Award those CME activities that meet appropriate guidelines. If you wish information as to how your hospital or society may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203.

IMPORTANT NOTICE

Published in this section are all educational opportunities which come to our attention which might be of interest to our membership. As some of these are very long, full year schedules, and others are detailed descriptions of courses, in order to conserve space, most of them will be published in only one issue of the Journal.

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	David N. Orth, M.D.
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Urology	Robert K. Rhamy, M.D.

Eligibility: All licensed physicians are eligible.

Administrative Fee: \$200 per week.

Credit: American Medical Association Physician's Recognition Award (Category 1) and American Academy of Family Physician's Continuing Education Accreditation.

Application: For further information and application, contact Paul B. Slaton, M.D., Director, Continuing Education, 3200 West End Ave., Suite 306, Nashville, TN 37203, Tel. (615) 322-2716.

Continuing Education Schedule

March 12-13 The Art and Science of Antihypertensive Therapy (10 hours)

For information contact Vanderbilt Continuing Education, 3200 West End Ave., Suite 306, Nashville, TN 37203, Tel. (615) 322-2716.

MEHARRY MEDICAL COLLEGE SCHOOL OF MEDICINE

Extended Continuing Education Program

Arrangements have been made with the following services and departments in the medical school to allow practicing physicians to participate in that service's activities for a period of one to four weeks. This program provides an opportunity for physicians to study in depth for a specified period. The schedule of activities is individualized in response to the physician's request by the participating department. The experience includes conferences, ward rounds, au-

diovisual materials and contact with patients, residents and faculty.

Oct. 7-9 Infection Control
Oct. 16 Pediatrics Prep III: Neonatology
Nov. 2-6 CPR: Faculty Inservice

For information contact Office of Continuing Medical Education, East Tennessee State University, Quillen-Dishner College of Medicine, Johnson City, TN 37614, Tel. (615) 928-6426, ext. 204.

Participating Departments

Anesthesiology	Ramon S. Harris, M.D.
Family Practice	John Arradondo, M.D.
Internal Medicine	
Cardiology	John Thomas, M.D.
	Kermit R. Brown, M.D.
	Qamar A. Kahn, M.D.
Chest Disease	Joseph M. Stinson, M.D.
	Paul A. Talley, M.D.
	Edward A. Mays, M.D.
Dermatology	Thomas W. Johnson, M.D.
	David Horowitz, M.D.
Gastroenterology	Ludwald O. P. Perry, M.D.
	Buntwal M. Somayaji, M.D.
General Medicine	Edward A. Mays, M.D.
Hematology/Oncology	Robert S. Hardy, M.D.
Neurology	Calvin L. Calhoun, Sr., M.D.
	Gregory Samaras, M.D.
Obstetrics & Gynecology	Henry W. Foster, M.D.
Ophthalmology	Axel C. Hansen, M.D.
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	Ira D. Thompson, M.D.
Urology	Marcelle R. Hamberg, M.D.

Fee: \$100 per week.

Credit: American Medical Association Physician's Recognition Award (Category 1). American Academy of Family Physicians Continuing Education Accreditation and Continuing Education Units by Meharry Medical College.

Application: For further information contact Frank A. Perry, Sr., M.D., Director, Continuing Education, Meharry Medical College, 1005 18th Ave. North, Nashville, TN 37208, Tel. (615) 327-6235.

EAST TENNESSEE STATE UNIVERSITY Quillen-Dishner College of Medicine

Feb. 27	School Health III
March 21	Immunology-Allergy Review
April 10-11	A Review of Pulmonary Medicine
April 24-25	Gynecologic Endocrinology: Infertility-Hirsutism-Menstrual Abnormalities
May 13	Substance Abuse in East Tennessee
May 20-	International Health Education Course
June 4	
June 4	J. Carroll Long Lecture
June 5-6	Geriatrics II — Sexuality and the Aging
July 18	Basic Science Review III: Psychopharmacology
Aug. 15	Stress in Medical Practice
Sept. 19	Advances in Laboratory Medicine

UNIVERSITY OF TENNESSEE CENTER FOR THE HEALTH SCIENCES

Continuing Education Schedule

This comprehensive listing of UTCHS courses includes programs of the Chattanooga, Knoxville, and Memphis units. The codes (C), (K), and (M) indicate the continuing education unit handling the arrangements for a particular program.

Feb. 2-4	(K)	2nd Annual Emergency Medicine Symposium
Feb. 7-14	(K)	3rd Annual Winter Update and Review Course for Physicians — Steamboat Springs, Colo.
Feb. 12-13	(C)	Diagnostic Radiology for the Primary Care Physician
Feb. 22-26	(C)	Emergencies in Obstetrics and Gynecology — Durango, Colo.
March 5-6	(C)	Summer Emergencies
March 15-20	(M)	14th Annual Review Course for Family Physicians
March 16-19	(M)	Three Nights on Cardiac Auscultation
March 19-21	(C)	Emergency Disorders Demanding Early Recognition and Treatment — Las Vegas
April 2-3	(C)	Workup and Treatment of Anemia
April 5-8	(M)	Otolaryngology Allergy Course
April 23-24	(M)	12th Annual Leigh Buring Conference — The Gifted Child
April 23-24	(C)	Case Studies and Office Orthopedics
April 23-25	(K)	4th Annual Family Practice Update and Review Course
April 30-	(C)	Ultrasound and CAT Scan for Family Physicians
May 1		
May 7-8	(C)	Solving Problems in Drug Therapy
May 15	(M)	Cardiac Risk Factor Modification
May 27-30	(M)	Rhinoplasty
June 4-7	(C)	Family Medicine Review
June 4-8	(K)	3rd Annual Practical Otolaryngology Course for the Primary Care Physician

- June 15-18 (C) Infection in the Emergency Room
- June 22-25 (C) Diagnostic Radiology for the Primary Care Physician — Orlando, Fla.
- July 10-12 (M) Cardiac Emergencies — Snowmass, Colo.
- Aug. 12-15 (C) Emergencies in Obstetrics and Gynecology — Gatlinburg

Community-Based CME

Knoxville Campus

Blount Memorial Hospital; Maryville, Tenn.

Every Tuesday; 7-8 a.m. (1 hr. credit)

Jellico Hospital; Jellico, Tenn.

Monthly, third Tuesday; 7-9 p.m. (2 hrs. credit)

Morristown-Hamblen County Hospital; Morristown, Tenn.

Alternate months, third Tuesday; 6:30-8 p.m. (1.5 hrs. credit)

Sweetwater Community Hospital; Sweetwater, Tenn.

Monthly, second Wednesday; 12:00 noon (1 hr. credit)

Takoma Hospital; Greeneville, Tenn.

Monthly, dates vary; 6:30 p.m. (1-2 hrs. credit)

Memphis Campus

UPDATES IN MEDICINE

Carroll County Hospital; Huntingdon, Tenn.

McKenzie Memorial Hospital; McKenzie, Tenn.

Henry County Hospital; Paris, Tenn.

Monthly, third Monday; 6:15-9 p.m. (2 hrs. credit); locations rotate.

If you would like assistance in planning a community-based CME program, contact the Associate Dean for CME and every attempt will be made to assist you through one of our three campuses.

For further information about any of these courses, please call the appropriate individuals below:

(C) Mr. LeRoy J. Pickles, Chattanooga
Tel. (615) 756-3370

(K) Mr. Jim Farris, Knoxville
Tel. (615) 971-3345

(M) Ms. Grace Wagner, Memphis
Tel. (901) 528-5547

or write or telephone:

Associate Dean for CME
University of Tennessee
College of Medicine
800 Madison Ave.
Memphis, TN 38163
Tel. (901) 528-5605

BAPTIST MEMORIAL HOSPITAL

Continuing Education Schedule

March 5-7 Scientific Symposium on Pituitary Disorders (cosponsored by Pituitary Foundation of America and University of Tennessee College of Medicine)

March 13-14 Cardiology Seminar

April 3-4 Gastroenterology Update — Cancer of the Gastrointestinal Tract

May 15-17 Anesthesiology Update

May 21-23 Emergency Room Medicine

All seminars are held in the Frank S. Groner Education Center Auditorium, Baptist Memorial Hospital, 1st floor, 20 S. Dudley, Memphis.

For further information contact Dr. Ken Burch, Director, Educational Support Services, Baptist Memorial Hospital, 899 Madison, Memphis, TN 38146; or call toll-free 1-800-542-6848 if located in Tennessee, or 1-800-238-6893 if located outside Tennessee, and ask for Educational Support Services.

BIOFEEDBACK SOCIETY OF TENNESSEE

Feb 21 Workshop: Biofeedback and Behavioral Medicine — Current Therapeutic Approaches — Glenstone Lodge, Gatlinburg.

For information contact Linda West, R.N., 920 Madison Ave., Suite 615, Memphis, TN 38103, Tel. (901) 523-9636.

IN SURROUNDING STATES

UNIVERSITY OF MISSISSIPPI

Feb. 5-6 Renal Update — Ramada Inn Coliseum, Jackson

March 26-27 3rd Annual Neurology Spring Symposium, with special emphasis on neurological infections — University of Mississippi Medical Center, Jackson

For information contact Continuing Education, Dept. A, University of Mississippi Medical Center, 2500 N. State St., Jackson, MS 39216.

UNIVERSITY OF KENTUCKY

Mini-Residencies in Office Management Of Emotional Problems

The objective of this course is to give physicians an ideal emotional counseling technique that fits busy office practices. The technique uses a concept of emotions that is consistent with human anatomy and psycho physiology. Yet, the technique requires no more physician time or patient cost than routine evaluations of new patients. Finally, the technique is readily understandable and easy for practitioners to apply.

One, two and three week courses. Minimum of 40 hours per week. *Tuition Fee*: \$350 per week for the 1st & 2nd week of training; \$500 for 3rd week of supervised practice with patients in the Intensive RBT Treatment Program.

For further information contact Maxie C. Maultsby, Jr., M.D., Office of Continuing Medical Education, Dept. of RBT, University of Kentucky, Lexington, KY 40506.

Continuing Education Schedule

- Feb. 5-7 Fiberoptic Bronchoscopy: A Workshop*
- Feb. 15-20 12th Family Medicine Review — Session I*
- March 30-31 Medical Aspects of Sports Symposium: A Good Sports Medicine Program for Our Schools*
- April 3-4 A Practical Approach to Ophthalmic Genetics*
- April 10-11 Endocrinology for the Practicing Physician*
- May 17-22 12th Family Medicine Review — Session II*
- May 28-30 General Pediatric Review*
- June 3-5 Update in Ob-Gyn*

*Presented at Hyatt Regency Hotel, Lexington, Ky.

For information contact Frank R. Lemon, M.D., Continuing Education, College of Medicine, University of Kentucky, Lexington, KY 40536, Tel. (606) 233-5161.

UNIVERSITY OF LOUISVILLE

- March 27-28 Nutrition and Cancer Update — Louisville, Ky. *Credit*: 14.5 hours AMA Category 1 and AAFP.

For information contact Gerald D. Swim, Assistant Dean, Continuing Medical Education, University of Louisville Health Sciences Center, Louisville, KY 40292.

SOUTHWEST ALLERGY FORUM

- March 22-25 Southwest Allergy Forum Annual Meeting — Arlington Hotel, Hot Springs, Ark. *Credit*: AMA Category 1 on an hour-for-hour basis.

For information contact Dr. Purcell Smith, Jr., General Chairman, P.O. Box 5675, Little Rock, AR 72215.

MEDICAL COLLEGE OF VIRGINIA

- April 24-26 Pediatric Springfest — Williamsburg Hilton and National Conference Center, Williamsburg, Va.

For information contact Dawn G. Mueller, M.D., MCV Station, Box 276, Richmond, VA 23298, Tel. (804) 786-9966.

OF SPECIAL INTEREST

ULTRASOUND AT VAIL

- March 21-28 2nd Annual Ultrasound at Vail Seminar — The Lodge, Vail, Colo.

For information write Ultrasound at Vail, P.O. Box 6093, Cherry Creek Station, Denver, CO 80206.

UNIVERSITY OF CALIFORNIA, IRVINE

- March 8-14 2nd Annual Mammoth Mountain Emergency Medicine Ski Conference — Mammoth Lakes, Calif. *Credit*: 25 hours AMA Category 1. *Fee* \$290.

For information contact Daniel L. Abbott, M.D., Medical Conferences, Inc., P.O. Box 52-B, Newport Beach, CA 92662, Tel. (714) 642-7080.

AMERICAN CANCER SOCIETY

- April 23-25 National Conference on Human Values and Cancer: Psychological, Social and Ethical Issues — Washington Hilton Hotel, Washington, D.C. *Credit*: 15.5 hours AMA Category 1.

For information contact Nicholas G. Bottiglieri, M.D., American Cancer Society, National Conference on Human Values and Cancer, 777 Third Ave., New York, NY 10017, Tel. (212) 371-2900.

JOURNAL OF THE TENNESSEE MEDICAL ASSOCIATION

Nuclear War Would Be "Last Epidemic," Medical Leaders Will Warn President

Leaders of American medicine plan to seek an early audience with the President of the United States to inform him that an atomic war would be the last epidemic our civilization would know.

Howard H. Hiatt, M.D., of the Harvard School of Public Health, Boston, states the hopelessness of attempting to treat survivors of a major nuclear war in an editorial in the Nov. 21 *Journal of the American Medical Association*. Dr. Hiatt's editorial is adapted from a presentation on the medical aspects of nuclear war he made to the AMA Board of Trustees this past fall. The AMA leaders agreed that they will ask for an audience with the President of the United States at an early date to present their finding: Medicine will be able to do very little for the survivors of a nuclear war and most of them will die in agony.

As most of the nation's doctors and hospitals are located in the larger population centers, first targets of the nuclear bombs, there would be very few doctors and hospitals remaining to treat the millions of casualties among those in the fringes of the bombed out cities, and those few would promptly be overwhelmed with the task.

An objective examination of the medical situation following a nuclear war leads to but one conclusion: prevention is our only recourse. The consequences of nuclear war are not, of course, only medical in nature. But they do compel us to pay heed to the inescapable lesson of contemporary medicine: where treatment of a given disease is ineffective or where costs are insupportable, attention must be given to prevention.

Both conditions apply to the effects of nuclear war—treatment programs would be virtually useless and costs would be staggering. Can any stronger ar-

gument be marshalled for a preventive strategy?

Dr. Hiatt details the treatment received recently by a young man hospitalized in Boston with severe burns from an automobile accident. During his hospitalization he received 281 units of fresh-frozen plasma and large quantities of other fluids. He underwent six operative procedures. There was much grafting of skin over the burned areas. He required mechanical breathing equipment, tubes into arteries and veins and other support. Despite these heroic measures, the man died on his 33rd day in the hospital. His injuries were likened by the person who supervised his care to those described for many of the victims of the atomic bomb that exploded over Hiroshima.

Society has been reluctant to face the reality of the catastrophe that would follow the use of atomic weapons, says Dr. Hiatt. Perhaps so little is said about the catastrophe because it is horrible to contemplate. Surely, so little is said about intervention (medical treatment) because so little that is hopeful can be said.

Dr. Hiatt describes a recent study of the impact of nuclear bombs on Detroit and on Leningrad. One big bomb on the center of Detroit would destroy 70 square miles of the city, bring 250,000 deaths, 500,000 injuries and widespread fires. Many of the injuries would be burns, with others from blast and radiation. Of the 18,000 hospital beds in and around Detroit, no more than 5,000 would be relatively undamaged. These would accommodate only 1% of the injured, and no one could deliver the services required by the burn victim in Boston.

The surviving Detroit and Leningrad physicians would be faced with large numbers of patients with blast injuries, including wounds of body tissue and bone fractures; burn injuries, including surface burns, eye burns, and damage to the lungs; and radiation injuries, including the delayed effects. Severe psychological problems would be widespread.

"If our political and military leaders have based strategic planning on mistaken assumptions concerning the medical aspects of a nuclear war, we have a responsibility. We must inform them and the American people of the full-blown clinical picture that would follow a nuclear attack and the impotence of the medical community to offer a meaningful response. If we remain silent, we risk betraying ourselves and our nation."

TENNESSEE MEDICAL ASSOCIATION
146th ANNUAL MEETING
April 8-11, 1981
Hyatt Regency Hotel, Knoxville, Tennessee

PHYSICIANS NEEDED IN INDIANA

MUNSTER, INDIANA—Family Physician, General Internists, ENT, OB-GYN, Orthopedists, General Surgeons needed for large midwest multispecialty group. Competitive first year salary with opportunity for early partnership; all fringes Clinic paid. Excellent opportunity to inherit existing and develop your own practice.

Call or send curriculum vitae to T. R. Hofferth, Hammond Clinic, 7905 Calumet Ave., Munster, Indiana 46321, Telephone (219) 836-5800.

THINKING OF RETIRING?

MEDICAL DIRECTORSHIPS available across the USA. Any age physician, no fee, malpractice insurance paid, 35 hours/week, \$35,000 to \$40,000/year, depending on location. List valid licenses, when able to relocate, and where.

Please send resume, including telephone number, to Fred V. Hrachovina, D.O., Physicians Placement Service, 1000 Second Avenue South, Minneapolis, Minnesota 55403.

PHYSICIANS NEEDED

Lovely southwestern climate. Multispecialty group seeking Ob/Gyn physician and Anesthesiologist. Substantial guarantee.

Contact: Talton Francis
Eastwood Medical Center
10301 Gateway West
El Paso, Texas 79925
Telephone: (915) 592-0201

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CLINICAL EDUCATION COORDINATOR NEEDED

East Tennessee State University, Quillen-Dishner College of Medicine, Department of Family Practice: This person will preferably be a boarded Family Practice physician with residency training with emphasis on teaching; should have teaching experience at the undergraduate level with interest in the development and evaluation of Family Medicine curriculum; should also have interest in faculty evaluation and development. This person will have administrative and supervisory experience for the purpose of supervising faculty and teaching; will also help to define the role of the department in the College of Medicine and serve as a preceptor for the clerks; will coordinate all clinical education activities in the Department of Family Practice. Position will be available 1 October 1980. Review of applications will begin immediately and continue until the position is filled. Direct inquiries and application to Terry L. Myers, M.D., Ph.D., Acting Chairman, Department of Family Practice, Quillen-Dishner College of Medicine, ETSU, P.O. Box 21,130A, Johnson City, Tennessee 37614. ETSU is an affirmative action equal opportunity employer, M/F. This position is funded by a grant.

FACULTY PHYSICIANS NEEDED

East Tennessee State University, Quillen-Dishner College of Medicine, Department of Family Practice has three positions available for faculty for the Family Practice Residency Programs, effective immediately. Excellent opportunity for community-oriented physicians desirous of academic life. Recent Family Practice Residency graduates have unique opportunity to further patient care experience with University responsibilities. Responsibilities include teaching in the residency programs; some patient care is essential in addition to resident and medical student training. Clinical, academic and research orientation desirable. Applicants must be boarded or board eligible in Family Practice. Direct inquiries and applications to Terry L. Myers, M.D., Ph.D., Acting Chairman, Department of Family Practice, ETSU, P.O. Box 21,130A, Johnson City, Tennessee 37614. Telephone (615) 928-3174. An Equal Opportunity Employer.

Journal of the Tennessee Medical Association

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of the Institute for Scientific Information

Valley Psychiatric Hospital

P.O. Box 21373 • Shallowford Road
Chattanooga, Tennessee 37421
Phone (615) 894-4220

A 100-bed private acute intensive treatment facility with programs designed to treat psychological, alcoholic and drug abuse problems of adults, adolescents and children.

A full range of treatment modalities is utilized, including individual and group psychotherapy, pharmacological therapy, adjunctive and family therapies. Adjunctive therapy includes special education teachers for school-age children and adolescents, recreational, occupational and the complete range of expressive therapies. Group therapy is five days each week with individual therapy at least three days a week. Patients have six hours a day in scheduled therapeutic activities. Comprehensive outpatient services are available with outpatient group therapy sessions being held two nights each week.

Licensed by the State of Tennessee. A member of the Tennessee Hospital Association, the American Hospital Association, and the National Association of Private Psychiatric Hospitals. Accredited by the Joint Commission on Accreditation of Hospitals.

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CYCLAPEN®-W (cyclacillin)

Indications

Cyclacillin has less *in vitro* activity than other drugs in the ampicillin class and its use should be confined to these indications: Treatment of the following infections:

RESPIRATORY TRACT

Tonsillitis and pharyngitis caused by Group A beta-hemolytic streptococci
Bronchitis and pneumonia caused by *S. pneumoniae* (formerly *D. pneumoniae*)
Otitis media caused by *S. pneumoniae* (formerly *D. pneumoniae*) and *H. influenzae*
Acute exacerbation of chronic bronchitis caused by *H. influenzae**

*Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to *H. influenzae*.

SKIN AND SKIN STRUCTURES (integumentary) infections caused by Group A beta-hemolytic streptococci and staphylococci, non-penicillinase producers.

URINARY TRACT INFECTIONS caused by *E. coli* and *P. mirabilis*. (This drug should not be used in any *E. coli* and *P. mirabilis* infections other than urinary tract.)

NOTE: Perform cultures and susceptibility tests initially and during treatment to monitor effectiveness of therapy and susceptibility of bacteria. Therapy may be instituted prior to results of sensitivity testing.

Contraindications Contraindicated in individuals with history of an allergic reaction to penicillins.

Warnings Cyclacillin should only be prescribed for the indications listed herein.

Cyclacillin has less *in vitro* activity than other drugs of the ampicillin class. However, clinical trials demonstrated it is efficacious for recommended indications.

Serious and occasional fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin. Although anaphylaxis is more frequent following parenteral use, it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with history of sensitivity to multiple allergens. There are reports of patients with history of penicillin hypersensitivity reactions who experienced severe hypersensitivity reactions when treated with a cephalosporin. Before penicillin therapy, carefully inquire about previous hypersensitivity reactions to penicillins, cephalosporins and other allergens. If allergic reaction occurs, discontinue drug and initiate appropriate therapy. Serious anaphylactoid reactions require immediate emergency treatment with epinephrine. Oxygen, I.V. steroids, airway management, including intubation, should also be administered as indicated.

Precautions Prolonged use of antibiotics may promote overgrowth of nonsusceptible organisms. If superinfection occurs, take appropriate measures.

PREGNANCY: Pregnancy Category B. Reproduction studies performed in mice and rats at doses up to 10 times the human dose revealed no evidence of impaired fertility or harm to the fetus due to cyclacillin. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, use this drug during pregnancy only if clearly needed.

NURSING MOTHERS: It is not known whether this drug is excreted in human milk. Because many drugs are, exercise caution when cyclacillin is given to a nursing woman.

Adverse Reactions Oral cyclacillin is generally well tolerated. As with other penicillins, untoward sensitivity reactions are likely, particularly in those who previously demonstrated penicillin hypersensitivity or with history of allergy, asthma, hay fever, or urticaria. Adverse reactions reported with cyclacillin: diarrhea (in approximately 1 out of 20 patients treated), nausea and vomiting (in approximately 1 in 50), and skin rash (in approximately 1 in 60). Isolated instances of headache, dizziness, abdominal pain, vaginitis, and urticaria have been reported. (See WARNINGS) Other less frequent adverse reactions which may occur and are reported with other penicillins are anemia, thrombocytopenia, thrombocytopenic purpura, leukopenia, neutropenia and eosinophilia. These reactions are usually reversible on discontinuation of therapy.

As with other semisynthetic penicillins, SGOT elevations have been reported.

As with antibiotic therapy generally, continue treatment at least 48 to 72 hours after patient becomes asymptomatic or until bacterial eradication is evidenced. In Group A beta-hemolytic streptococcal infections, at least 10 days' treatment is recommended to guard against risk of rheumatic fever or glomerulonephritis. In chronic urinary tract infection, frequent bacteriologic and clinical appraisal is necessary during therapy and possibly for several months after. Persistent infection may require treatment for several weeks.

Cyclacillin is not indicated in children under 2 months of age.

Patients with Renal Failure Cyclacillin may be safely administered to patients with reduced renal function. Due to prolonged serum half-life, patients with various degrees of renal impairment may require change in dosage level (see DOSAGE AND ADMINISTRATION in package insert).

Dosage (Give in equally spaced doses)

INFECTION	ADULTS	CHILDREN*
<i>Respiratory Tract</i>		
Tonsillitis & Pharyngitis	250 mg q.i.d.	body weight < 20 kg (44 lbs) 125 mg q.i.d. body weight > 20 kg (44 lbs) 250 mg q.i.d.
<i>Bronchitis and Pneumonia</i>		
Mild or Moderate Infections	250 mg q.i.d.	50 mg/kg/day q.i.d.
Chronic Infections	500 mg q.i.d.	100 mg/kg/day q.i.d.
Otitis Media	250 mg to 500 mg q.i.d.†	50 to 100 mg/kg/day† q.i.d.
<i>Skin & Skin Structures</i>		
250 mg to 500 mg q.i.d.†		50 to 100 mg/kg/day†
<i>Urinary Tract</i>		
500 mg q.i.d.		100 mg/kg/day

*Dosage should not result in a dose higher than that for adults.

†depending on severity

Tennessee Medical Association

ANNUAL MEETING

April 8-11, 1981

Hyatt Regency Hotel
Knoxville, Tennessee

SCHEDULE OF CME SESSIONS AND TMA MEETINGS

WEDNESDAY, APRIL 8

TMA House of Delegates

- 1:30 p.m. Delegates Orientation
- 3:00 p.m. First Session
- 6:30 p.m. Delegates/Exhibitors Reception

TMA Auxiliary

- 7:30 p.m. Executive Committee
- 8:00 p.m. Finance Committee

THURSDAY, APRIL 9

TMA Past Presidents Breakfast

- 8:00 a.m. Director II

TMA House of Delegates

- 9:00 a.m. Reference Committees

Neurosurgery

- 2:00 p.m. Business/Scientific
- 4:20 p.m. UT College of Veterinary Medicine

Ophthalmology

- 12:00 Noon Luncheon
- 12:55 p.m. Scientific

Orthopedic

- 8:30 a.m. Scientific
- 12:00 Noon Luncheon
- 1:00 p.m. Scientific/Business
- 7:00 p.m. Reception/Banquet

Plastic Surgery

- 7:30 a.m. Breakfast/Business
- 9:30 a.m. Scientific

Psychiatry

- 8:00 a.m. Scientific
- 11:45 a.m. Luncheon
- 6:00 p.m. Reception/Banquet

Public Health Officers Assn.

- 1:00 p.m. Scientific
- 4:00 p.m. Business

Surgery

- 6:30 p.m. Reception/Banquet

TMA Auxiliary

- 8:00 a.m. Registration
- 8:30 a.m. All Sessions

FRIDAY, APRIL 10

Tennessee Medical Association

- 7:30 a.m. IMPACT Breakfast
- 9:00 a.m. Emergency Medical Services Committee Seminar
- 6:30 p.m. President's Reception/Banquet

Child Psychiatry

- 11:30 a.m. Luncheon/Tour
- 1:30 p.m. Scientific

College of Emergency Physicians

- 12:15 p.m. Luncheon

Family Physicians

- 9:00 a.m. Scientific

Gastrointestinal Endoscopy

- 10:00 a.m. Scientific
- 4:00 p.m. Business
- 6:30 p.m. Reception/Banquet

Internal Medicine

- 9:00 a.m. Executive Council
- 3:15 p.m. Scientific

Neurology

- 1:30 p.m. Business/Scientific

Ophthalmology

- 10:00 a.m. Business
- 12:00 Noon Luncheon
- 12:55 p.m. Scientific

Orthopedic

- 8:25 a.m. Scientific

Pediatrics

- 7:45 a.m. Scientific
- 12:00 Noon Luncheon
- 1:30 p.m. Scientific

Psychiatry

- 8:00 a.m. Council/Business

Surgery

- 10:00 a.m. Scientific
- 12:00 Noon Luncheon

- 2:00 p.m. Scientific

- 4:00 p.m. Business

Thoracic

- 1:00 p.m. Scientific
- 4:30 p.m. Business

Urology

- 1:00 p.m. Scientific/Business

TMA Auxiliary

- 7:30 a.m. All Sessions

SATURDAY, APRIL 11

Tennessee Medical Association

- 7:00 a.m. Medicine and Religion Breakfast
- 9:00 a.m. House of Delegates Second Session

Allergy and Immunology

- 12:00 Noon Luncheon
- 1:30 p.m. Scientific/Business

Anesthesiology

- 9:00 a.m. Business
- 10:00 a.m. Scientific
- 12:30 p.m. Luncheon
- 2:00 p.m. Scientific
- 6:30 p.m. Reception/Banquet

Child Psychiatry

- 9:00 a.m. Scientific

Dermatology

- 1:00 p.m. Scientific/Business
- 6:00 p.m. Reception/Dinner

Gastrointestinal Assistants

- 9:00 a.m. Education/Business

Long-Term Care

- 8:45 a.m. Scientific
- 12:00 Noon Luncheon/Business
- 1:15 p.m. Scientific

Pathology

- (Knoxville Acad. of Med. Bldg.)
- 11:00 a.m. Business
- 12:00 Noon Luncheon
- 1:00 p.m. Business/Scientific

Radiology

- 12:30 p.m. Luncheon
- 1:30 p.m. Scientific

TMA Auxiliary

- 7:00 a.m. All Sessions

SUNDAY, APRIL 12

Dermatology

- 8:30 a.m. Clinical

CPR or CPA?



If you just about go into cardiac arrest each time you pay taxes, you need to practice a little preventive medicine. You need a CPA, a Certified Public Accountant.

You may be paying more taxes than necessary. And a CPA knows how to help you find out. He does a lot more than just prepare tax returns.

CPA's will advise and assist you in your tax planning so you can keep more of the money you make.

Start now in preventing that next heart attack. Consult a CPA.



TENNESSEE SOCIETY OF
CERTIFIED PUBLIC ACCOUNTANTS

Alkaline Reflux Gastritis

DAVID R. PICKENS, JR., M.D.; GEORGE VELA, M.D.;
J. L. FARRINGER, JR., M.D.; and RICHARD B. TERRY, M.D.

To define alkaline reflux gastritis as an entity separate from the rest of the postgastrectomy syndromes, we need to give a broad description of it. The definition will include the pathophysiology, clinical symptoms, and endoscopic and histological changes in the gastric mucosa of patients having alkaline reflux gastritis.

Alkaline reflux gastritis is an inflammatory reaction of the gastric mucosa produced by regurgitation into the stomach of alkaline duodenal contents. It usually follows operations on the stomach which either remove, alter, or bypass the pyloric sphincter mechanism, but it may occasionally occur as a result of pyloric sphincter dysfunction in a patient who has not undergone prior gastric surgery.

This disorder is characterized clinically by a continuous burning sensation in the epigastrium that is aggravated by meals and not relieved by vomiting. The vomitus contains bile, often with the residue of a recent meal, and is frequently associated with weight loss and anemia. Endoscopically, the gastric mucosa shows erythema, edema, friability, and superficial erosions, and bile reflux into the stomach can usually be seen during endoscopy. Chemically, there is hypochlorhydria with minimal response to gastric secretion stimulation tests. Finally, on

histologic examination both parietal and chief cells may be absent from the gastric glands and intestinal metaplasia may be observed.

Materials and Methods

From Jan. 31, 1976, to Jan. 6, 1978, 22 patients underwent remedial operations for the correction of alkaline reflux gastritis. Five of these patients were women and 17 were men; 20 were white and two were black. Their age varied from 27 to 75 years. Of the 22 patients, six had originally had vagotomy, antrectomy, and Bilroth II reconstruction, and 11 had had vagotomy, antrectomy, and Bilroth I reconstruction. One patient had undergone gastrojejunostomy, and three vagotomy and pyloroplasty. One patient had not had previous gastric surgery.

The time between the original operation for peptic ulcer and the onset of symptoms of reflux gastritis varied from 0 to 8 years. Of the 21 patients who had undergone surgery, 15 were asymptomatic for some period after surgery; 10 were asymptomatic for two years, 2 for four years, 2 for six years, and 1 for approximately eight years. The remaining six patients had no relief of symptoms after the original operation; five of these had a Bilroth I reconstruction and one a Bilroth II reconstruction.

Clinically, all 22 patients had epigastric pain, nausea, and vomiting of bile. Forty percent ingested huge amounts of antacids because of the epigastric burning sensation which frequently woke them during the night. Weight loss, rang-

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ing from 15 to 70 lb, was found in 72% of the patients, 18% of the patients experienced upper GI bleeding, while nine of the patients (41%) were anemic, with a hemoglobin of less than 10 gm. Nineteen of the 22 patients were treated with cholestyramine, with mild response in only three patients; there was no response in the rest.

All of these patients were evaluated clinically by radiography, upper GI series, gastroscopy, and gastric biopsy. Gastroscopy demonstrated marked hyperemia and friability of the gastric mucosa, and bile in the stomach, and six had concomitant esophagitis. Roentgenographic examination with upper GI series was of value only in the exclusion of such lesions as recurrent ulceration or stomal obstruction, and to delineate the changes in gastric anatomy resulting from previous surgery.

Gastric biopsy demonstrated variable degrees of superficial inflammation, with loss of mucosal cell mass in the early cases and intestinalization in the advanced cases. When done, gastric analysis revealed achlorhydria both during fasting and following gastric secretory stimulation with betazole hydrochloride (Histalog).

Remedial Operations and Postoperative Evolution

Twenty-one patients underwent a Roux-en-y diversion procedure and one a Hunt-Lawrence pouch plus the Roux-en-y. The Roux-en-y was performed to shunt the duodenal contents into the jejunum 45 to 60 cm distal to the stomach. In the patients who had a Bilioth II reconstruction, the afferent limb of the jejunum was divided at the stomach, the distal end of the stomach was closed, and the stoma left intact; the proximal afferent loop was moved down 45 to 60 cm from the gastrojejunostomy and anastomosed to the efferent limb in an end-to-side manner.

In 8 of the 11 patients who originally had a Bilioth I reconstruction, the anastomosis was taken down, the duodenal stump was closed, and the jejunum divided approximately 12 in distal to the ligament of Treitz. The distal or efferent limb was then brought up either anterior or posterior to the colon and anastomosed end-to-end to the gastric pouch.

In the three remaining patients who also had a Bilioth I reconstruction, the anastomotic reconstruction was not taken down. Instead, this anastomosis was closed using the T-A stapler across

the side of the anastomosis, after which the jejunum was divided 12 in from the ligament of Treitz and a Roux-en-y reconstruction performed.

The period of hospitalization averaged 11 days. Two patients experienced mild gastric atony that responded within two weeks to nasogastric suction and nutritional support, including TPA. One patient was hospitalized for two months because following the Roux-en-y reconstruction on June 7, 1977 the patient did not tolerate the oral feedings. On July 1, 1977, it was found on upper GI series that the contrast media did not leave the gastric pouch, so on July 14, 1977 the patient was returned to surgery, where his gastrojejunostomy was found to be adherent to the anterior abdominal wall; there were also a number of adhesions around the stomach. All of the adhesions were taken down, and a double barrel jejunostomy was performed. The patient's weight and nutrition were maintained on jejunostomy feedings, and on Aug. 1, 1977, a gastrografin swallow again demonstrated retention of the contrast media in the gastric pouch. Endoscopy showed a patent stoma with poor gastric emptying. After consultation with Dr. Eugene Davidson of Emory University, and Dr. James Thompson at the University of Texas at Galveston, the decision was made to start I.V. metoclopramide (Reglan), with excellent response. The patient was able to tolerate feedings and since that time has been asymptomatic off the medication.

Results

The follow-up period for this series has been between six months and 2½ years. The mortality rate of the 22 patients was 0, and excellent clinical results were obtained in 15, with good results in six. This last group has complained of occasional episodes of fullness and an occasional rare sensation of nausea. One patient still complains of mild epigastric pain. This patient, who is considered a poor result, reports occasional episodes of nausea and vomiting, and has been unable to gain weight.

Comments

There has been some controversy with respect to the chemical and biological mechanism by which the reflux of duodenal contents produces gastritis. Lawson¹⁻³ has performed experimental studies allowing the duodenal contents to enter the stomach of gastrectomized dogs. This pro-

duced superficial and atrophic gastritis. These changes were greatest when biliary and pancreatic juices were in contact with the gastric mucosa, and less pronounced with either biliary or pancreatic juice alone. The site of greatest change was the antral portion of the stomach. Microscopic studies of the gastric mucosa demonstrated loss of parietal cells. This histologically proven postgastrectomy gastritis returns to normal after a Roux-en-y, as also shown in the extensive workup and follow-up of patients with bile gastritis by Herrington,⁴ Buskin, Wickbom and Woodward,⁵⁻⁷ and Sawyers.⁸

Capper^{9, 10} demonstrated regurgitation of duodenal contents after depositing a bolus of contrast media into the duodenum, a phenomenon more frequent in patients with gastric ulcer. In nine patients who had previously had gastric surgery, the pH of the gastric mucosa was monitored after continuous histamine stimulation during reoperation. All the peristomal areas demonstrated an alkaline area except that in one patient who had a Roux-en-y diversion procedure. According to Capper, 10% of the patients with duodenal ulcer have high bile concentration in the gastric aspirates when compared with the normal patients.

Duppleis,¹¹ in his investigations concerning the role of bile, found higher concentrations of bile acids in the stomachs of patients with gastric ulcers. Davenport¹² demonstrated that a number of substances, among them bile and bile salts, disrupt the gastric mucosal barrier, permitting retrograde diffusion of hydrogen ions from the gastric lumen into the mucosa, with subsequent release of pepsin and histamine into the gastric lumen, leading to gastritis.

Black¹³ demonstrated the injurious role of bile on the gastric mucosa and noted that fasting and postprandial bile acid concentrations were higher in patients with atrophic gastritis and gastric ulcer than in normal patients. In experimental animals, bile alone did not appear to be deleterious to the gastric mucosa.¹⁴

Reflux gastritis is probably the result of the interaction of multiple factors. The reflux of duodenal contents with its bile and pancreatic secretions causes retrograde diffusion of hydrogen ions into the gastric mucosa with the release of sodium and gastric amines. Gastric stasis with associated hypoacidity permits overgrowth of bacteria which deconjugate some of the bile salts, adding to the injury to the gastric mucosal barrier by the bile salts.

Summary

In this study of 22 patients, bile gastritis was more frequent after Bilroth I reconstruction, probably because of the increased use of the Bilroth I reconstruction in the last two decades. The syndrome of bile gastritis seems to be well established, although the pathophysiological mechanism still is not well understood. It has been proved that bile acids and probably some other components of the duodenal contents produce bile gastritis. A careful clinical history, endoscopic and histologic examination of the gastric mucosa, and the demonstration of achlorhydria or hypochlorhydria are essential to separate alkaline gastritis as an entity from the rest of postgastrectomy syndromes.

Mild alkaline reflux gastritis has been treated successfully with cholestyramine by some authors.¹⁵ Severe cases of alkaline gastritis or cases in which conservative measures consisting of diet, antispasmodics, and cholestyramine are unsuccessful should have the benefit of a diversion procedure such as Roux-en-y or a Henle loop operation. The excellent postoperative evolution of these patients has been confirmed in many publications,^{4,8, 16} as has improvement of the morphologic picture of the gastric mucosa during follow-up studies after Roux-en-y reconstruction.^{4,8, 16-18}

REFERENCES

1. Lawson HH: Effect of duodenal contents of the gastric mucosa under experimental conditions. *Lancet* 1:469, 1964.
2. Lawson HH: The reversibility of postgastrectomy alkaline reflux gastritis by Roux-en-y loop. *Br J Surg* 59:13, 1972.
3. Lawson HH: The effect of duodenal contents on the gastric mucosa. *S Afr J Surg* 3:79, 1965.
4. Herrington JL, Sawyers JL, Whitehead WA: Surgical management of reflux gastritis. *Ann Surg* 180:562, 1974.
5. Buskin FL, Wickbom G, DeFord JW, et al: Postoperative alkaline reflux gastritis. *Surg Gynecol Obstet* 138:933, 1974.
6. Buskin FL, Wickbom G, DeFord JW, et al: A clinical evaluation of postoperative alkaline reflux gastritis. *Am Surg* 41:88, 1975.
7. Buskin FL, Wickbom G, Woodward ER: Use of Roux-en-y diversion of duodenal secretions in the treatment of reflux gastritis. *South Med J* 69:132, 1976.
8. Sawyers JL: Bile alkaline reflux gastritis. *South Med J* 72:266, 1979.
9. Capper WM: A test for pyloric regurgitation. *Lancet* 2:621, 1966.
10. Capper WM, Butler TJ, Kilby JO: Reversal of non-Addisonian achlorhydria by Roux-en-y loop. *Gut* 8:612, 1967.
11. Duppleis DJ: The pathogenesis of gastric ulceration. *Lancet* 1:974, 1965.
12. Davenport HW: Destruction of gastric mucosal barrier by detergents and urea. *Gastroenterology* 5:175, 1968.
13. Black RB, Roberts G, Rhodes J: The effect of healing on bile reflux in gastric ulcer. *Gut* 12:552, 1971.
14. Beyers EM Jr, Jordan PH: The effect of bile upon gastric mucosa. *Proc Soc Exp Biol Med* 110:864, 1962.
15. Ayulo JA: Cholestyramine in postgastrectomy syndrome. Preliminary report. *Am J Gastroenterology* 57:207, 1972.
16. Drapanas T, Bethea M: Reflux gastritis following gastric surgery. *Ann Surg* 179:618, 1974.
17. Van Heerden JA, Priestley JT, Farrow GH, et al: Postoperative alkaline reflux gastritis. *Am J Surg* 118:427, 1969.
18. Davidson DE, Hersh T: Bile reflux gastritis. Contribution of inadequate empty. *Am J Surg* 130:514, 1975.

Council on Medical Service Report C

AMA Activities in Health Planning

(Appendix E)

Past House Action: I-79:141-145; A-79; I-78:128-132; A-78:273-280; I-77:73, 178-179, 218, 226; A-77:225; C-75:116-124.

At the 1979 Interim Meeting, the House of Delegates adopted Report I of the Council on Medical Services, titled "AMA Activities in Health Planning." Report I summarized the major provisions of Public Law 96-79, the Health Planning and Resources Development Amendments of 1979, and described AMA activities in relation to implementation of the health planning law. The purpose of the present report is to inform the House of AMA activities and other developments in health planning over the past six months.

1980 Federation Health Planning Survey

At the 1979 Interim Meeting, the House of Delegates adopted Resolution 48, which requested the Council on Medical Service "to conduct a study of the various programs which monitor and analyze the activities of health systems agencies developed by state and component medical societies and include the results of such study in communications to the federation and to physicians on health systems agencies when appropriate."

Accordingly, the Council, through its Ad Hoc Committee on Health Planning, surveyed the activities of constituent medical societies in the health planning area, including the type of programs spoken to by Resolution 48 (I-79).

The survey was designed to elicit information from state medical associations in four broad health planning categories: (1) society policy and physician participation; (2) level of experience in specific planning activities/programs such as certificate of need (CON), appropriateness review, and rate regulation; (3) accomplishments and goals of the state society in health planning; and (4) areas in which the AMA could further assist in health planning activities. In addition, state medical associations were requested to forward examples of policy statements, communications tools and other materials illustrative of the state program.

The survey was mailed to each state medical society in January 1980, and responses were received from 35 societies—a significantly higher rate of return than that from the previous health planning survey conducted in 1978, when only 19 state medical societies responded.

Following is a summary of survey responses by category:

1. Society Policy and Physician Participation

Sixteen respondents indicated that policy position statements on health planning had been adopted. The 19 respondents who indicated no formal health planning policy did indicate numerous other health planning activities—apparently being conducted in the absence of official policy guidance. Only one respondent submitted a policy statement calling for repeal of the health planning law. On balance, it appears that health planning activities are conducted primarily at a staff level. However, 24 states

indicated that a council or committee had been established with overall responsibility for health planning activities, while two others had assigned this activity to an already existing council or committee. One state replied that the society addresses planning issues as a committee of the whole. An overwhelming majority of respondents actively encouraged physician participation at the governing body and committee levels of local HSAs. The combined responses of the state societies indicate that more than 790 physicians are serving either on HSA governing bodies or as members of statewide health coordinating councils (SHCCs). Most of these physicians were identified as members of their state societies.

The level of physician interest and participation in health planning was termed "moderate" by most societies. Three societies reported a high level of physician interest while 11 indicated physician interest was low. Fifteen societies indicated that the level of physician participation has increased over the past year and 17 states indicated that physician participation had remained about the same. Only three states reported a decrease in physician participation within the last 12 months.

2. *Experience in Specific Planning Programs/Activities*

This section of the survey attempted to measure the state societies' experience with and attitudes toward certificate of need, hospital rate review, closure/conversion/decertification and appropriateness review.

Of 11 states reporting experience with state hospital rate review programs, seven indicated a belief that these programs were needed, and four were uncertain as to the need. Major concerns with rate review programs expressed by respondents included the danger of expansion in rate setting to include private physicians, maintaining the financial stability of hospitals in the face of such cost constraints, and overall physician hostility to rate setting even in states where the program was viewed as needed.

Five states reported involvement with a state closure/conversion/decertification program, with only one state reporting that physicians viewed the program as needed. The major concerns of physicians in this area centered on the content of state implementing regulations, assurance of due process and an overall question as to the effectiveness of decertification in controlling costs and maintaining quality of care.

New certificate of need requirements embodied in P.L. 96-79 will require a majority of state legislatures to amend their CON statutes to remain in compliance. Only six societies reported that legislatures in their states would be unwilling to amend current CON laws, while 17 reported that their legislatures would make the required changes. Fourteen state societies expressed support for their state's current CON program and nine were opposed. Of those expressing support, however, nine indicated that they would oppose the expansion of CON authority to physicians' offices. Sixteen societies classified their present state CON program as "marginally effective" as a cost containment strategy, while 12 respondents did not believe CON was at all effective in containing costs. Only two societies rated CON as an effective cost containment strategy.

Because of the timing of the survey (January 1980), responses to inquiries concerning appropriateness review activities were few. Federal regulations implementing appropriateness review were published in December 1979 and distributed to state and local planning agencies in January 1980, hence state medical societies had had little opportunity to be exposed to this activity at the time the survey was conducted. Even so, 14 societies reported that criteria and standards for appropriateness review were under develop-

ment by planning agencies. These societies indicated that a range of 5 to 14 services were under consideration for review, and it is apparent from the responses that there will be little uniformity between states.

3. *Health Planning Goals and Accomplishments*

The responses to inquiries concerning health planning goals of the state societies in 1980 were somewhat varied; however, the majority identified similar general priorities, including cost containment, increased access and availability to health care, promoting ambulatory care services, eliminating duplication of functions between state and local planning agencies, expansion of prepayment mechanisms, increased physician participation at the local level, expansion of local control over health planning, bed reductions and regionalization of services where appropriate.

Regarding past accomplishments, it appears that state societies have encountered difficulties in gaining effective input to the health planning program. Major problems cited fall into five general classifications: (a) the vast amount of paperwork generated in the health planning system which must be reviewed; (b) the amount of time required of physician participants; (c) consumer attitudes and biases against medicine and other providers; (d) a perceived anti-provider bias of many state and local planning agencies; and, (e) maintaining physician interest and input. Despite these difficulties, a majority of respondents cited major health planning achievements in two areas: (a) impact on a particular aspect of health planning, and (b) increased physician awareness of the health planning program and its process, accompanied by increased physician participation in planning activities. Comments by individual societies reflect a conviction that physician involvement in health planning has had a positive impact and that physicians are willing to continue their efforts in spite of the difficulties encountered.

4. *AMA Assistance*

Respondents emphasized the following areas in which the AMA might be of further assistance to state medical societies: (a) serving as a clearinghouse for information on federal regulations and initiatives in health planning, with legal analysis as appropriate; (b) providing increased information on the activities of other states; (c) sponsoring seminars and regional programs for physicians which focus on state health planning problems and needs; and (d) providing position papers and technical assistance documents such as model state health plans and model health systems plans.

One respondent called for increased AMA assistance in efforts to repeal the health planning law.

In the opinion of the Council, survey results indicated a sharp increase since 1978 in the level of knowledge of the health planning program and the organized participation of state medical societies in planning activities. This is evident in the responses to survey questions and in the attachments forwarded to the AMA by many of the states. The attachments included copies of policy statements or statements on various aspects of the planning program presented at public hearings, job descriptions for health planning staff positions, lists of physicians involved in planning, and copies of newsletters and other informational documents. The priority accorded to health planning by state medical societies has also appeared to increase, as reflected in the increased amount of physician and staff resources devoted to this area. These efforts have continued despite the difficulties in addressing the health planning program.

The survey also reflects a note of confidence on the part of the state societies as a result of their activities. Very few societies seemed to believe that their efforts had not had some impact on the direction of planning in their states.

Federal Health Planning Activities

Proposed reductions in spending to balance the federal budget in 1981 may have severe repercussions in the health planning program. In April 1980 the Office of Management and Budget (OMB) proposed reductions in federal support for health planning which could accelerate the already shrinking federal support for planning at the local level.

The OMB proposal would reduce federal funding to health systems agencies by 30% while making only minor reductions in the funds for state health planning and development agencies (SHPDAs). The proposed cutbacks are detailed in the following table:

	Current Funding 1980	OMB-Proposed 1981 (in millions)	Authorized in P.L. 96-79 1981
Health Systems Agencies	\$124	\$ 86	\$185
State Health Planning and Development Agencies	\$ 35	\$32.5	\$ 40

Under the OMB proposal, funds would not be appropriated in 1981 for the federal conversion/discontinuance program mandated in P.L. 96-79. This program also was not funded in 1980. Untouched by the proposed budget reductions are funds for the four centers for health planning, experimental rate review agencies and area health development funds. P.L. 96-79 authorizes 1981 funding at \$8 million for the centers; \$7 million for the rate review agencies and \$20 million for area health development funds. It must be noted, however, that funds have never been appropriated for the latter.

It is expected that representatives of the planning sector will vigorously oppose any reduction in federal funding. The American Health Planning Association (AHPA), which represents many of the local and state agencies, has announced that adoption of the reductions proposed by the OMB will compromise the viability of many HSAs and may cause some agencies to renounce their designations. At the same time, it has been predicted that AHPA may seek to introduce a legislative amendment to P.L. 96-79 which would remove restrictions on the acceptance of private donations to HSAs.

There is little question that a reduction in federal funding will impair the ability of many HSAs to perform the basic tasks of plan development and implementation and the regulatory activities of CON and appropriateness review mandated by the health planning law. This erosion of HSA effectiveness at the local level is likely to further focus and concentrate planning authority at the state level where federal funding would remain relatively constant.

The uncertainty over federal funding is compounded by the continuing inability of the Department of Health and Human Services (DHHS), formerly Health Education and Welfare, to promulgate implementing regulations in the health planning program in a timely manner. Although the enactment of P.L. 96-79 in October, 1979 necessitated revision of nearly all federal health planning regulations, DHHS has managed to publish only two revisions during the first six months of 1980.

In December 1979, HHS published final regulations for the implementation of appropriateness review. However, these regulations were developed under the requirements of P.L. 93-641 and do not reflect certain requirements imposed by P.L. 96-79, and an anticipated revision has not been forthcoming. The present regulations call for a review of services on an areawide basis but do not prevent an

HSA from making institution-specific recommendations as well. The authority to identify the specific type of services to be reviewed, and the timetable for those reviews, was granted to the state agencies. Plans for conducting appropriateness reviews were to be developed by the HSAs and SHPDAs by April 1, 1980, with actual reviews to begin as of July 1, 1980. The Council, and its Committee, are monitoring this activity closely out of concern for the possible implications for hospitals.

In February 1980, HHS published a "guidance document" on new CON requirements for use by planning agencies, and announced its intention to bypass the usual rulemaking process by publishing new CON regulations as "interim final rules." Since "interim final rules" are effective upon publication, use of this process would have forestalled public comment on the new regulations. This decision was reversed in March 1980 after protests from the AMA and other organizations. Proposed CON rules were published in March 1980 with a 60-day public comment period. AMA comments were provided on these proposed rules since the new regulations will set forth the process for expansion of CON authority to physicians' offices.

The delay in issuing new CON regulations is particularly critical since it is estimated that most states must amend present statutes to conform to new federal requirements, and such amendments must be in effect by 1981. HHS had initially planned to publish final regulations in time to allow consideration of state amendments during the 1980 legislative session. The six-month delay in publication of these regulations will prevent the majority of states from considering new conformance legislation until 1981. For this reason, the AMA has urged Congress to extend the compliance deadline to the end of the state's first regular legislative session following promulgation of the final regulations.

Another major area in which implementing regulations have not yet been published is that of HSA governing body composition. New rules are needed to incorporate changes in P.L. 96-79 which provide for a public selection process. Although regulations had not been published by May 1, 1980, HHS issued a policy guidance notice to health planning agencies outlining several selection policies which could be employed and required the HSAs to develop and implement new selection processes by July 1, 1980. The AMA has protested this perceived attempt to regulate in lieu of formal regulations.

It is the opinion of the Council that the threat of reduced funding for health planning coupled with the continued poor performance by HHS in developing implementing regulations has removed much of the momentum from the planning program, particularly at the local level. Should Congress approve substantially reduced funding for 1981, it is possible that the impetus for health planning will pass from the local level to state government.

Planning Agency Status

As of May 1, 1980, 198 of the 204 health systems agencies in the country have been fully designated. Two HSAs, Los Angeles, Calif., and Flagstaff, Ariz., are conditionally designated while the HSA in Bismarck, N.D., has been notified that it will be returned to conditional designation on July 1, 1980. The designation of the HSA in Yuma, Ariz., will be terminated in July 1980 and efforts are continuing to designate new HSAs in Topeka, Kan., and Las Vegas, Nev.

Of the 57 state health planning and development agencies, 37 have been fully designated; however, HHS anticipates difficulty in making full designations in the remaining state agencies. As in the past, these difficulties center on the lack of CON legislation meeting federal requirements in these states.

The Council on Medical Service, and its Ad Hoc Committee on Health Planning, will continue to monitor health planning activities and provide assistance to the federation in this area.

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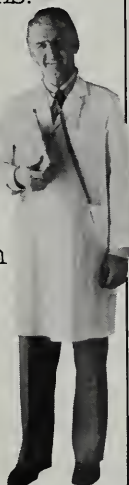
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Council on Medical Service Report L

“Medical Necessity” Determinations

(Appendix F)

Past House Action: I-79:223-224; A-79:180-181; I-78:169; A-78:33,317, 328; I-77:204; C-76:153-155

At its 1979 Interim Meeting, the House of Delegates referred to the Board of Trustees two resolutions and a suggested substitute resolution, all dealing with third party determination of the “medical necessity” of services ordered by a treating physician. The three resolutions were referred to the Council for its consideration; the Council believes they should be considered together.

Resolution 68 (I-79) would have the AMA oppose “those provisions of existing contracts, including but not limited to the Blue Cross/Blue Shield Federal Employee Program (FEP), which provide that a third party payor has power of decision as to medical necessity of services over and above the judgment of the treating physician.” It would have the Association seek invalidation of such provisions in the FEP program.

Resolution 72 (I-79) would have the AMA oppose “any third party payor determining medical necessity, thereby abrogating the judgment of the treating physician, unless such decisions are made by peer review.”

Substitute Resolution 72-A (I-79), recommended by the reference committee, deletes the mention of abrogating the treating physician’s judgment and adds availability as a condition for requiring peer review; the substitute would place the Association on record as opposing “any third party payor determining medical necessity unless such decisions are made by peer review, where available.”

Meaning of Terms

The Council believes that some of the friction inherent in third party disallowance of claims on these grounds can be reduced by a clearer understanding of the terms used.

Medical necessity, unfortunately, is a term capable of many meanings. In one sense, it is used as the title of a special screening program adopted by the Blue Cross/Blue Shield Associations; the Associations’ “Medical Necessity” program identifies, through advice from appropriate national specialty societies, procedures which have become outmoded or are considered to be of doubtful value. Such procedures are not routinely paid for under BC/BS policies, but may be paid for on the basis of special justification from the ordering physician. The Health Insurance Association of America has a similar program, titled “Medical Appropriateness.”

The Council does not believe that this type of insurance screening program is the intended target of the resolutions, since the procedures are not totally excluded (payment can be made on the basis of additional information from the physician), the decision as to which procedures are listed rests primarily with the profession rather than the insurer, and because the intent is to inform physicians in advance

which procedures are on the screening list.

The type of "medical necessity" decision addressed by the resolutions appears to be the type which rests on language such as that of Sec. 1862 of the Medicare law, which prohibits any payment under the program for items or services "which are not reasonable and necessary for the diagnosis or treatment of illness or injury or to improve the functioning of a malformed body member."

The determination as to "medical necessity" can relate to the procedure itself—as when the items or procedures ordered have no obvious connection with the patient's symptoms or diagnosis, or when the procedure is either outdated or still experimental—or to the location where it is performed.

This House of Delegates itself has frequently suggested that patients should not be hospitalized for tests which can be performed on an outpatient basis, and has questioned the duplication of tests for hospital inpatients when the same tests had been performed prior to admission.

Routine "battery" tests for all admitted to a hospital are a current focus for "medical necessity" decisions; this House has urged hospital medical staffs to review hospital "standing orders" with a view to minimizing the number of tests performed.

Peer review, on the other hand, has been a matter of frequent consideration in this House, which has reaffirmed a number of times the definition first presented by this Council at the Association's 1971 Annual Convention:

"PEER REVIEW: Evaluation by practicing physicians of the quality and efficiency of services ordered or performed by other practicing physicians. Peer review is the all-inclusive term for medical review efforts. Medical practice analysis; inpatient hospital and extended care facility utilization review; medical audit; ambulatory care review; and claims review are all aspects of peer review."

This definition was reaffirmed in 1976 when, on the basis of a Council report, this House agreed that the definition should not be modified to require some organizational approval as a condition for physician participation, that hiring of medical directors and consultants by insurance companies to assist in reviewing claims is not necessarily unacceptable, and that "the integrity of the review must flow from the integrity of practicing physicians."

In 1977, the House focused on "level of care" decisions and affirmed a position that all quality assessment, all utilization review, and all level of care decisions are inseparable and fall within the province of PSROs and other recognized forms of peer review.

At both 1978 meetings, the House emphasized the importance of local peer review and the inappropriateness of inflexible national standards for appropriateness review. In addition, at the 1978 Annual Meeting this House adopted Substitute Resolution 119, "Blue Cross/Blue Shield Rider," which addressed much the same question as does Resolution 68 (I-79):

"RESOLVED, That the American Medical Association urge all health insurance carriers and government health care financing agencies to rely on appropriate medical peer review programs for adjudication and resolution of all matters concerning the quality or utilization of medical services which require professional judgment; and be it further

"RESOLVED, That peer review programs shall have as their goal both improved quality of medical care and more efficient delivery of medical services."

Thrust of I-79 Resolutions

The Council has reviewed Resolutions 68 and 72 in some depth, and has discussed them with a representative of the Illinois State Medical Society (whose

delegation introduced both resolutions) and with representatives of the Blue Cross/Blue Shield Associations and the Health Insurance Association of America.

On the basis of its review and discussions, the Council interprets Resolution 68 (which opposes contract provisions giving a third party payor the power of decision as to medical necessity over the judgment of the treating physician) not as proposing to give the treating physician carte blanche but as emphasizing that "medical necessity" decisions should not be made as a corporate decision by the payor but are a matter of medical judgment. Its thrust would, therefore, be consistent with that of Resolution 72, which emphasizes more explicitly the peer review element in medical necessity decisions.

Both insurance organizations agree that professional peer review is an appropriate mechanism for making medical necessity decisions. Both also emphasized, however, that most carriers have competent medical departments, headed by physicians, which can render objective and accurate determinations of medical necessity in most instances. Where medical necessity issues cannot be resolved in-house, the carriers use a variety of methods: in some cases, referral to medical society committees or foundations; in some a canvass of appropriate state or local medical specialty society members; in some, contractual relationships with local physician-nurse teams.

The Council believes there is a consensus as to the importance of peer review in matters concerning the quality and utilization of medical services, which the Council interprets to include "medical necessity" decisions. The problem appears to lie in the various ways in which the theory is put into practice.

Problem Areas

As a result of its review, the Council believes it has identified at least some of the major problems related to "medical necessity" determinations, which include lack of patient information, lack of communication between insurers and physicians, and inadequate "appeal" processes.

A major concern is lack of *patient or policyholder information* about coverage. The Council recalls the early days of Medicare, when patients often assumed that physicians were at fault if Medicare did not pay for a service; today most Medicare beneficiaries are aware that Medicare does not "cover everything," and that a number of medically valid services are excluded.

Those early days are now, in part, being repeated with insurance. Particularly as insurers are under public and governmental pressure to restrain premium increases, claims are coming under more intensive review—as in the Blue Cross/Blue Shield "Medical Necessity" and the HIAA "Medical Appropriateness" screening programs, and in efforts to reduce payment for routine hospital admission tests.

Often, however, patients and policyholders are not fully aware of these restrictions and how they operate. Brochures explaining group health insurance programs may omit the information, or the policyholder may fail to read it thoroughly. For example, the patient may easily fail to understand that so-called diagnostic admissions can lead to a refusal to pay for the inpatient hospital stay involved, even if the tests themselves are necessary and covered, or that services considered necessary by the physician for preventive purposes may not be reimbursed because they are not part of "diagnosis and treatment."

Some hospitals, recognizing this confusion, now provide what amounts to a "warning" to patients—that a utilization review committee may decide further hospitalization is not justified or that emergency room care is usually insured only for actual emergencies, and that insurance may not cover all the services provided.

Physicians and medical societies too often lack information on exclusions in health insurance policies and the basis for them. While the two national health insurance associations usually publicize any substantial change in their overall policies well in advance, local variations may not be as well announced. A physician may discover a restriction only by bumping against it.

Certainly not all insurance companies are deficient in communications with the profession; some do, in fact, make a serious effort to keep physicians informed. However, there do appear to be gaps—perhaps because some of the more substantial disallowances (as, for example, for a hospital stay for an alleged “diagnostic admission”) are applied by hospital insurance carriers, which are less likely to mount physician information campaigns than are medical insurance carriers.

The “*appeals*” procedure which the Council believes is sometimes lacking is, in essence, a formal protocol for identifying those situations in which additional medical evidence might shift the carrier determination from “not necessary” to “necessary” and for determining whether that evidence is available.

For example, the Council reviewed a 1973 Blue Cross/Blue Shield statement concerning screening for “diagnostic admissions” in the Federal Employee Program contract, which points out that a two- to five-day inpatient stay with a number of diagnostic test charges but no indication on the claim of any treatment would create a preliminary presumption of admission for diagnostic purposes only—which would result in payment for the tests only, not for the inpatient stay.

However, secondary screenings are also undertaken to determine whether the patient’s physical condition or age justifies hospitalization, whether the tests themselves are so complex that outpatient testing is not indicated, or whether the suspected diagnosis is one which, if confirmed, normally calls for immediate hospitalization.

Yet the statement is not clear as to whether the physician who ordered the admission in the first place is ever consulted or whether the “secondary screenings” deal only with case records. This seems to the Council an elementary step, both in an equitable determination of the legitimacy of a claim and in “educating” physicians as to the basis for the carrier’s exclusions, but the Council is uncertain as to how often it is done or under what circumstances.

In its considerations the Council has been conscious, as are the members of this House generally, of the increasing need for both caution and precision in language used to state policy when the Association may be called upon to explain and defend such language in the courts. The Council believes, therefore, that it is more appropriate to again state what the Association is for and what it recommends than to try to identify specific situations or contracts for AMA opposition. This is especially true since the Council has been informed that “medical necessity” clauses in insurance contracts are under litigation in at least five states at present.

Recommendations

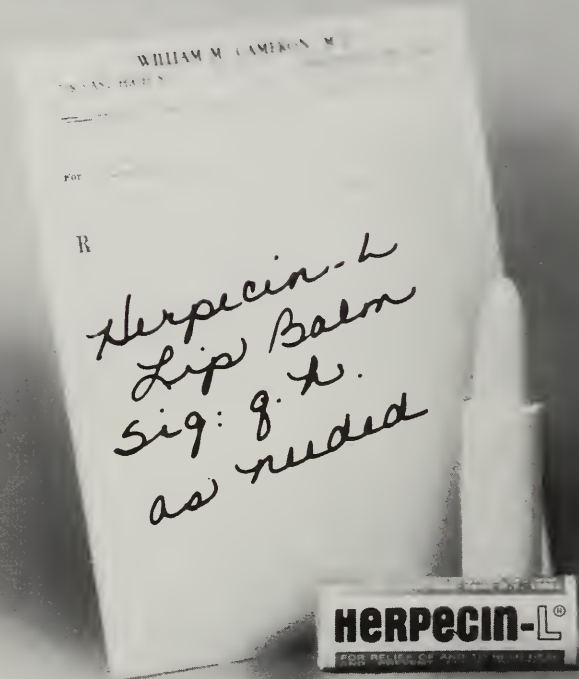
The Council accordingly *recommends* that the Association reaffirm the policy expressed in Resolution 119 (A-78), which (a) urged health insurance carriers and government health care financing agencies to rely on appropriate medical peer review programs for adjudication and resolution of all matters concerning quality or utilization of medical services requiring professional judgment, and (b) urged that peer review programs have as their goal both improved quality of care and more efficient delivery of medical service.

In order to achieve more effective implementation of this policy, the Council further *recommends* that health insurance carriers, government financing agencies, physicians and medical societies be urged to explore ways of improving communications, such as the following:

- In furtherance of past Association recommendations that policyholders be thoroughly and clearly informed as to the extent of their coverage, more detailed information explaining the "medical necessity" exclusion should be provided, especially when the exclusion refers more to the site of the service than to the service itself;
- Insurers should develop formal protocols as to their methodology for determining "medical necessity," including distinctions between those instances where in-house medical expertise is considered sufficient and those where outside consultation is considered necessary;
- Third party methodologies for determining "medical necessity" should be made available to medical societies and to individual physicians, as well as listings of those specific situations (such as the ordering of either experimental or outdated procedures or questionable hospital admissions) where additional data may be required;
- In "medical necessity" decisions where the determination may be modified by additional medical evidence, there should be an opportunity for the treating physician to provide such evidence before a final decision not to pay is made.

The Council further *recommends* that this report be adopted in lieu of Resolutions 68, 72, and 72-A (I-79).

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American Medicine Posts New Gains in 1980

Americans in 1980 were more concerned than ever before with their physical and emotional well-being.

Every citizen was becoming an expert on diet and nutrition, exercise programs, no-smoking campaigns and on generally adopting a lifestyle aimed at enhancing health.

Much of this was healthful and good. But some experts were concerned that it might go too far—that Americans were headed toward being concerned too much and too often with minor discomforts and unfounded health fears. America's physicians faced the problem of how to continue to encourage their patients to live the healthful life, and at the same time help them to avoid becoming overly obsessed with their body and its care.

Meantime, American medicine and health care continued its steady progress in 1980. There were no sensational "breakthroughs" against the major killer diseases, or even against the common cold. But there were bits and pieces of new knowledge on a broad front that are contributing to better understanding of health and disease.

Health Improves

Physicians were gratified to learn in 1980 that they are doing many things right. Early in the year came a report from the federal government listing clear progress in extending health resources and in reducing premature and preventable deaths. Officials viewed the health improvement in the past ten years as an almost revolutionary development with far-reaching implications.

Life expectancy at birth in 1980 was up to more than 73 years, while infant mortality was down to no more than 12 per 1,000 live births. These two statistics often are cited in evaluating a nation's health care system. Both are setting new records year after year as people live longer and more infants survive the experience of birth.

Calculations at Stanford University this fall indicated that average Americans in the not-too-distant future can expect to live to a vigorous, active and productive 85 years. There will be few deaths in youth or middle years in another genera-

tion. White women are almost there, with a life expectancy of 78 years today. Of course many people always live far beyond the stated "norm."

Problems That Remain

Despite progress, no one—especially physicians—was fully satisfied with the state of the nation's health. The president of the American Public Health Association pointed to the health hazards of the environment, particularly polluted air and water, as problems that remain to be solved. Safe disposal of toxic chemical waste assumed proportions of a major national health problem as more Love Canal situations were uncovered across the nation in 1980.

And there still were Americans whose access to health care could be improved. The task of health education to motivate people to live a truly healthier life was formidable. Chicago newspapers published editorials entitled "Parents Who Don't Care" in reporting that after five months of intensive health education efforts 40% of pupils had not received their required immunization shots at the opening of school. It took a massive crash program to reach the unvaccinated.

Health manpower continued to be debated in 1980. The health care community was almost desperate for more nurses, and many areas still needed doctors. But a federal government study predicted that the end of the doctor shortage (if there is one) is in sight, that in another ten years there will be a surplus. The medical education community should cut back on enrollment in medical schools, the panel declared. The medical community promptly cautioned that this recommendation may be unfounded.

Steadily rising costs of health care continued during 1980 to plague the health care community. Physicians and hospitals continued their voluntary effort to contain the rate of increase, but inflation in the general economy hit the health care community as well, and costs continued to rise. Various proposals were aired to curb cost escalation, but nothing drastic happened in the cost area in 1980. Everyone agreed that costs should be contained, but no one was exactly sure how to go

about it intelligently.

Diet and Nutrition

In the all-important field of diet and nutrition, a fresh element of common sense surfaced in 1980 with issuance of new guidelines by the Departments of Agriculture and Health, Education, and Welfare (now Health and Human Services). They recommend: Eat a variety of foods, including foods with adequate starch and fiber; maintain proper weight; avoid too much fat, saturated fat and cholesterol, and too much sugar and salt; drink alcohol only in moderation.

The new guidelines quit trying to set specific quantity recommendations—a certain portion of one's diet should come from fat, for example. Still, there was criticism of the "eat-less-of-this-and-avoid-too-much-of-that" dietary advice, as being unrealistic, unnecessary and unworkable. Nutritionists continued to point to the virtual absence of nutritional disease in the United States today as clear evidence that the American diet is not all that bad.

The health scare of the year was toxic shock syndrome. All at once millions of American women who used tampons during menstruation read in their newspapers and heard on the air that these useful little devices were blamed in a serious illness. One brand of tampons was withdrawn from the market. Experts issued guidelines recommending use of less absorbent types, frequent changing of the tampon, and switching to pads a part of each day.

There were only a few hundred cases of toxic shock syndrome reported in the entire nation, but a major health scare was created, and was still a factor at the end of the year.

Major Hopes

The medical research hope of the year was interferon. Interferon is the body's own mechanism of resisting infection and disease. At year's end efforts were under way in a number of large laboratories to produce enough interferon to conduct large scale human tests to determine whether it is effective against cancer, and possibly against many virus diseases. Small scale preliminary tests have shown promise.

Laboratory production of interferon is made possible through one of the more sensational research advances of this generation, gene splicing. It's complicated and difficult to understand, but a big segment of the public in 1980 became aware that science now knows how to go into gene struc-

ture and rearrange them in a favorable manner.

Large commercial units were involved in the potentials of producing interferon and other possibilities stemming from Recombinant DNA. Harvard University considered, and finally rejected, a proposal to form a corporation and go into the business. Stock prices boomed when a West Coast commercial firm working with Recombinant DNA went public.

Another great research hope of 1980 was a natural substance in the brain—beta-endorphin. Scientists sought to learn how the endorphins worked to affect human emotions and to ease pain. They have shown promise in treating depression and schizophrenia. The endorphins look promising, but there still is much more to be learned.

Cancer Therapy

In cancer, drugs are curing more patients now than ever before, interferon is the hope of the future, and steady progress continued in 1980. Survival rates improved for many of the most common forms of cancer. Cancers of the uterus, cervix, breast, colon, rectum, prostate and bladder are slowly yielding to treatment. Cancer mortality dropped among Americans under age 55.

The cure rate continued to be promising among children with leukemia, and was running as high as 80% in childhood lymphoma.

The tragic final illness and ultimate death of film star Steve McQueen underscored dramatically the still widespread belief in unproved and unconventional cancer therapies. Americans still were patronizing "clinics" across the Mexican border to partake of laetrile, coffee enemas and rub downs with castor oil in futile efforts to cure their cancer.

The American medical community had a word of advice to those facing apparently terminal cancer regarding the Mexican clinics and their offshoots—"Save your money." Your surviving family will need it, and the treatment won't do you any good. Perhaps McQueen's death will be a warning signal to Americans to shun the unproven therapies.

Top Medical Stories

A brief rundown of some of the medical news stories of 1980:

- A Canadian researcher in the relatively new science of chronobiology found that Monday is the most dangerous day in the week for men to die of heart attack. Perhaps it's the stress of the return

to work after a weekend.

- The once-controversial CAT scanner—cited frequently as an example of the high cost of modern medical technology—proved itself in 1980, with findings that it actually saves money when used to guide the radiation treatment of cancer.

- The public read with much interest a suggestion that children were less likely to choke on flat hot dogs than on round ones, but at year's end the nation still was consuming round hot dogs, and no flat ones were in sight.

- Major improvements in the health care of American Indians were noted in a report in the fall. Disease rates were dropping, and infant deaths were much less common. Some of the credit went to the physicians recruited by the American Medical Association for Project U.S.A. These men and women served for short periods in the Indian Health Service and the National Health Service Corps to relieve the regular physicians for vacations and opportunity to participate in continuing medical education courses. There was a return also to cooperation with the Indian medicine men. Modern doctors found that these folk practitioners could teach them something about getting well.

- Skiers were interested in a study which found that their new-type runaway straps (holding ski to boot in event of a fall) actually were causing the ski tips to fly up and hit the skier in the face. Switching to a simple braking device could correct the problem.

- Literally millions of families plagued by nighttime snoring of one of their members read with interest of a new approach—wear a cervical neck collar in bed, to prop up the chin and keep the airways open, thus curbing snoring.

- Middle-age men were advised not to fear dropping dead on the tennis court or during other strenuous exercise. This happens only to those who already have far advanced heart disease, said a Dallas researcher.

- Women were offered hope for better control of menstrual cramps, in a report evaluating new medications now available—prostaglandin inhibitors. These have proved effective in some trials.

- Asthmatic athletes were given encouragement by a study that discovered they can forestall an attack of exercise-induced asthma, particularly in cold weather, by wearing a simple surgeon's gauze face mask.

- The federal government, the AMA, and others warned several times during the year of

potential health hazards from the proliferating sun tanning parlors across the nation. Tanning is bad for the skin, whether from sunlight or from lamps.

- Dog bites have become a major health problem in the United States, with more than one million reported bites each year and probably countless others unreported.

- Near-sighted Americans (of which there are many millions) were intrigued by reports of a new eye operation purported to correct this vision problem. But America's ophthalmologists this fall urged caution. The operation still is far from proved. It's called radial keratotomy, and it involves a series of tiny cuts into the eyeball. Most eye doctors advise glasses rather than surgery.

- A new rabies vaccine was confirmed in 1980 as safe and effective. The new vaccine requires only five shots, instead of the 21 shots needed of the old vaccine.

- Organ transplants continued. Kidney and cornea transplants were widespread. Only a few heart transplants still were being done. Liver transplants struck a snag for a time, but had been resumed at the year's end.

- The AMA issued, for guidance of physicians, a new book, *Laboratory Tests in Medical Practice*. In preparing the book, the AMA's consultants determined that laboratory medicine as now practiced in the United States is more advanced and of better quality than in any other nation in the world.

- The Los Angeles County Medical Society stepped in with enough money to rescue the city's Poison Information Center, a valuable data source about poisoning for doctors all over the world. The Center had been about to close for lack of funds.

- Whether or not there is a shortage of physicians, one expert in management of medical practice reported that physicians are beginning to move into small towns and hamlets, many of which haven't had doctors for years. Practice opportunities are fewer in the larger cities and their suburbs, and doctors are beginning to head back to the small towns.

- Senility in advancing years can be relieved often by medical treatment, a government task force found. Normal aging does not include gross intellectual impairment, confusion and delusions, the group declared.

- The battle on smoking continued in 1980. And the *Journal of the American Medical Association* published a report pointing out that snuff and chewing tobacco, being promoted as alterna-

tives to smoking, also are dangerous to your health.

- Nonsmokers are adversely affected by tobacco smoke, a California research project found. Nonsmokers working in a closed environment with smokers had a significantly reduced breathing capacity when compared to nonsmokers not exposed to cigarette smoke. And a Surgeon General's report declared that women are catching up with men in lung cancer, as the ratio of men vs. women smokers evens off.

- Emergency medicine specialists learned during 1980 that drowning victims may be successfully revived after 20 minutes or more under water, if the water temperature was quite cold. Icy cold water extends the survival period, previously thought to be no more than five minutes.

- Disabling occupational lung diseases of coal miners, asbestos workers, textile workers, quarry workers and others occupied much attention in public health circles in 1980. There was no question that these occupations had some effect on the lungs of the workers. But some experts declared that only when combined with cigarette smoking were these conditions actually disabling.

- Legionnaires' Disease, much in the news a few years ago, was becoming routine and no longer created a panic. Ohio scientists said the death toll may be as much as 70,000 Americans annually from unrecognized cases of Legionnaires' Disease.

- Nutritionists from the Americas gathered in the late summer at Los Angeles for the triennial Western Hemisphere Nutrition Congress. Overeating and obesity proved to be a major nutritional problem for North Americans. Latin Americans reported progress in providing better diets for their peoples.

- The enzyme chymopapain once again was found effective in relieving back pain from slipped disc, but still was unproved to the satisfaction of the U.S. Food and Drug Administration. Americans were going to Canada for chymopapain treatments.

- A host of medical advice for joggers continued to appear in the medical journals and in the public press. A Canadian researcher offered pointers for avoiding heat stroke while jogging — take plenty of fluids, run in the early morning or evening on hot days, and slow down speeds in hot weather.

- Some couples were opting for having their babies at home rather than in the hospital. But obstetricians still preferred to handle deliveries in

hospitals, or at least in birthing centers, where support facilities are available should unforeseen problems occur.

- Further studies confirmed that THC, the active ingredient in marijuana, is helpful in controlling nausea in cancer patients receiving strong medication. It isn't necessary to smoke the weed. The THC is extracted and given in capsule form.

- The millions of American men, particularly older men, who suffer from sexual impotence read with interest last winter a report that there often is a physical cause for impotence, and that treatment might help. Harvard Medical School studies found that erectile potency depends on a healthy psyche, but also on neurological, vascular, and hormonal systems functioning properly.

- The coronary bypass operation remained controversial in 1980. Some said it is not worth the cost and effort. Others strongly endorsed it. A Milwaukee study found that coronary bypass surgery permits many men to continue to work who previously would have been cardiac cripples.

- Is the current fad for saunas and hot tubs doing anything for our health? Not much. The main value of the heat treatment, said an Illinois doctor, is that it feels so good when you quit.

- An extremely large chunk of the American population is overweight, and the percentage is growing year by year. One ray of solace for the fatties came in a report last spring declaring the height-weight tables held up as the American norm are probably much too low, that Americans don't have to be as skinny as the tables say to be in good health. But there's no doubt that true obesity is a health risk.

- New findings continued to appear in 1980 on the subject of estrogen use by women during menopause to relieve the discomforts and remain feminine. California researchers determined that estrogen used by postmenopausal women increases risk of breast cancer, if continued for several years.

- DMSO caused a stir toward the year's end. This purported panacea for everything still is licensed for medical use for only one limited ailment, bladder cysts. But it is being pushed outside medical circles as treatment for arthritis. Possible side effects still are unknown.

- Test tube babies still commanded press interest, but there was little activity. U.S. efforts had not produced a fetus by late in the year. This technique for enhancing fertility still is far from perfected

—From the American Medical Association

Multiple Myeloma With Extra-Osseous Metastases

PATRICIA M. BIHL, M.D.; DOUGLAS A. CLARK, M.D.; and F. ANTHONY GRECO, M.D., Editor

Multiple myeloma is a marrow-based neoplasm of plasma cells, the clinical manifestations of which are primarily due to effects of tumor upon marrow and bone and to the systemic effects of abnormal monoclonal protein production. It is not generally appreciated, however, that tumor involvement of extra-osseous tissue often occurs in this disease. We have recently followed a patient who presented with typical multiple myeloma and developed striking extramedullary disease.

Case Report

A 61-year-old black male retired school teacher presented in September, 1978, after falling and fracturing a vertebral body and the left femoral head. He was admitted to his local hospital where his left femoral head was pinned. When the pin loosened in October he underwent total hip replacement. He was found at that time to be anemic, and to have an elevated serum protein which on electrophoresis demonstrated a monoclonal γ -globulin spike. He was referred to Vanderbilt University Medical Center (VUMC) for further evaluation.

On admission to VUMC in November, he had a shotty cervical lymphadenopathy and was lethargic and confused. His serum calcium was 16.2 and his hemoglobin 10.2. Quantitative immunoglobulins revealed an IgG of 4,760 mg/dl. Urinary protein electrophoresis showed 1.8 gm protein per 24 hours with minimal amounts of albumin and large amounts of lambda light chains. Skeletal x-rays showed compression deformities of T-4, -5, -9, and L4 and a large lucency in the inferior left ischium. Bone marrow aspiration and biopsy revealed homogeneous sheets of atypical plasma cells diagnostic of multiple myeloma. Following treatment with a saline diuresis and combination chemotherapy (lomustine, cyclophosphamide and prednisone) his serum calcium returned to normal and his mental status cleared.

He received four cycles of chemotherapy with minimal bone marrow suppression, followed by melphalan for four days and prednisone daily for seven days every four weeks. Because of bone pain associated with a lytic lesion of the right pubic ramus, he received radiotherapy in April 1979, but in May, he developed several large supraclavicular nodes, a testicular mass, and rectal bleeding. Examination showed a large left upper quadrant abdominal mass, supraclavicular and testicular masses, and grossly bloody stools, and a chest x-ray demonstrated bilateral hilar masses. His hemoglobin was 8.5, and calcium was 9.5, but serum protein electrophoresis was normal. After treatment with red

cell transfusions his rectal bleeding abated, but a right orchiectomy revealed the testis to be involved with a plasma cell neoplasm. Although sigmoidoscopy was negative, barium enema revealed an "apple core" lesion at the splenic flexure which on biopsy at colonoscopy revealed a plasma cell neoplasm identical to that in the testis. A CT scan of the abdomen revealed a large mass replacing the spleen and involving both the stomach and the colon at the splenic flexure. Biopsy of the supraclavicular mass also revealed plasma cell neoplasm.

As the patient was not felt to be a candidate for more intensive chemotherapy, he received 1,320 rads whole abdominal irradiation and 2,160 rads to the left supraclavicular mass. He was discharged home in July, 1979, but was readmitted to his local hospital in September, 1979 because of general debility and expired. An autopsy was not performed.

Discussion

Involvement of extra-osseous tissue by plasma cell neoplasia has long been recognized.¹⁻⁵ Many authors distinguish between the relatively rare extramedullary plasmacytoma arising primarily in soft tissue and classical multiple myeloma with metastatic spread outside bone.^{3,6-8} Autopsy studies of patients with typical multiple myeloma have demonstrated metastases to extra-osseous tissue in up to 75% of cases.^{1,2} Although this often consists of microscopic infiltration by plasma cells, gross tumor formation has been reported in 31% of cases in one series.⁴ The most frequent sites of involvement are the lymph nodes, spleen, liver, and kidneys.³ Extra-osseous spread of multiple myeloma tends to occur late in the course of the disease and to be resistant to therapy; it may not be clinically recognized due to the frequent location in the chest and abdominal cavities.⁷

Wiltshaw⁸ has recently contrasted metastatic multiple myeloma with extramedullary plasmacytoma. Extramedullary plasmacytoma may arise from plasma cells in any tissue in the body, although the nasopharynx is the most frequent site of primary involvement. Histologically, extramedullary plasmacytoma is similar to multiple myeloma, and abnormal monoclonal protein production has been reported, usually in patients with widespread disease. Unlike multiple myeloma,

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the bone marrow is rarely involved at presentation, and when bony involvement does occur, extramedullary plasmacytoma has no preference for red marrow-bearing bones. Hypercalcemia, hematologic abnormalities, and renal insufficiency are much less frequent, and median survival is prolonged compared with multiple myeloma (72 months vs. 36 months). Some patients with extramedullary plasmacytoma are cured by local resection and/or radiotherapy, while there is as yet no curative therapy for multiple myeloma with extra-osseous involvement.

Our patient fits the pattern of multiple myeloma with metastatic spread. Several features of his case are unusual. Even though his serum protein electrophoresis became normal, he had progressive extra-osseous disease which may have been due to emergence following chemotherapy of a less differentiated clone of his tumor. Furthermore, his pattern of metastases was unusual.

Involvement of the GI tract by any plasma cell tumor is rare. Since the initial description in 1924, approximately 100 cases of GI plasmacytoma have been reported, with only about 25% associated with multiple myeloma.⁹ The stomach and small intestine are most frequently involved.¹⁰ As in our patient, gastrointestinal plasmacytomas usually present with abdominal pain and bleeding.¹¹ Radiographically, the lesions are not diagnostic, being indistinguishable from adenocarcinoma of the bowel; occasionally they may simulate multiple polyposis or ulcerative colitis.⁹

Testicular involvement in multiple myeloma is also extremely rare. In a review of autopsied

cases, Hayes² noted lesions in 5 of 182 cases. Less than 20 cases of symptomatic testicular plasmacytoma are reported in the literature.¹² The tumor usually is present in a patient with widely disseminated disease although it is occasionally recognized as the first manifestation of the disease. The rapid deterioration of our patient and the resistance of his tumor to treatment are consistent with the reported course of metastatic extra-osseous multiple myeloma. Patients with multiple myeloma who develop clinical evidence of extra-osseous involvement should have biopsies to document this problem since it may indicate a change in prognosis and management. 

REFERENCES

1. Chung J, Gordon AJ: Multiple myeloma: Lesions of the extra-osseous hematopoietic system. *Am J Clin Pathol* 20:934-945, 1950.
2. Hayes DW, Bennett WA, Heck FJ: Extramedullary lesions in multiple myeloma: Review of literature and pathologic studies. *Arch Pathol* 53:262-272, 1952.
3. Dolin S, Dewar JP: Extramedullary plasmacytoma. *Am J Pathol* 32:83-100, 1956.
4. Innes J, Newall J: Myelomatosis. *Lancet* 1:239-245, 1961.
5. Pasmantier MW, Azar HA: Extraskelatal spread in multiple plasma cell myeloma: A review of 57 autopsied cases. *Cancer* 23:167-174, 1969.
6. Martinson FD, Pulvertaft RJV: Clinical and live-cell study of extramedullary plasmacytoma of the upper respiratory tract. *Br J Surg* 54:8, 1967.
7. Craft IL: The late appearance of extramedullary lesions in myelomatosis. *Br J Cancer* 21:501-504, 1967.
8. Wiltshaw E: The natural history of extramedullary plasmacytoma and its relation to solitary myeloma of bone and myelomatosis. *Medicine* 55:217-237, 1976.
9. Rao KG, Yaghami I: Plasmacytoma of the large bowel: A review of the literature and a case report of multiple myeloma involving the rectosigmoid. *Gastrointest Radiol* 3:225-228, 1978.
10. Oberkircher PE, Miller WT, Arger PH: Nonosseous presentation of plasma-cell myeloma. *Radiology* 104:515-520, 1972.
11. Goldstein WB, Poker N: Multiple myeloma involving the gastrointestinal tract. *Gastroenterology* 51:87-93, 1966.
12. Chica G, Johnson DW, Ayola AG: Plasmacytoma of testis presenting as primary testicular tumor. *Urology* 11:90-92, 1978.

CLINICAL CENTER STUDY OF YOUNG PATIENTS WITH MALIGNANCIES

The cooperation of physicians is requested in the referral of young patients with malignancies for studies being conducted by the National Cancer Institute, Pediatric Oncology Branch, at the Clinical Center, National Institutes of Health, Bethesda, Md.

Patients with acute leukemia, neuroblastoma, rhabdomyosarcoma, Ewing's sarcoma, osteogenic sarcoma, and non-Hodgkin's malignant lymphoma (especially Burkitt's lymphoma) are eligible for these studies. Patients selected for the program will generally have received no previous definitive therapy. Clinical trials involve evaluation of new combinations of chemotherapy, radiotherapy, surgery, and biologic response modifiers. All patients accepted for admission to this branch may also be enrolled in studies of optimal supportive care techniques (e.g., autologous bone marrow infusion, platelet and granulocyte transfusion, and laminar air flow protective isolation). Patients may be admitted with any extent (stage) of their disease, except in the case of neuroblastoma and rhabdomyosarcoma studies which are restricted to extensive disease.

There will be no cost to the patient for evaluation, treatment, travel (except for the first trip), hospitalization, or ambulatory care related to these clinical trials.

Physicians interested in further details or in having their patients considered for admission may write or telephone: Attending Physician, Pediatric Oncology Branch, NCI, Building 10, Room 3B-12, National Institutes of Health, Bethesda, MD 20205; Telephone (301) 496-4256.

Chronic Peritoneal Dialysis in Insulin-Dependent Diabetes Mellitus

Ruth Miller, M.D. (Endocrinology Fellow — St. Thomas Hospital): The patient is a 36-year-old man with diabetic nephropathy and azotemia who has had insulin-dependent diabetes since age 11 (25 years). He never had good metabolic control until the past year, when he began subcutaneous insulin infusion with a portable insulin pump. Since then his diabetic control had improved to the point where his glycosylated hemoglobin was down to 9.5%, indicating a mean plasma glucose of less than 150 mg/dl. Bilateral retinal hemorrhages appeared in 1977, and a successful vitrectomy was performed in the left eye in February, 1979, but later a massive vitreous hemorrhage and hemorrhagic glaucoma occurred in the right eye. This time vitrectomy was ineffective, and he was left essentially blind in the right eye and with limited vision in the left eye. He also has had severe diabetic neuropathy with marked pain, paresthesia, and weakness in both lower extremities, and coronary heart disease with angina and congestive heart failure requiring use of digitalis and large doses of diuretics. His serum creatinines have gradually risen over the past two years, reaching a level of 13 mg/dl prior to dialysis. He had severe weakness, nausea, and vomiting due to uremia. Anticipating hemodialysis, an internal arteriovenous fistula from the radial artery to the cephalic vein had been constructed in the right forearm, but it has never been used. Because of the fear of further retinal hemorrhages with hemodialysis, the patient chose peritoneal dialysis. His fear of overwhelming infection with immunosuppressive drugs prompted him to reject the recommendation for renal transplantation.

The Diabetes Clinical Care Conference at St. Thomas Hospital, Nashville, Tenn., a collaborative educational program of the St. Thomas Department of Hospital Education and the Vanderbilt Diabetes Research and Training Center, is coordinated by Joy Woodard, R.N. and edited by Alan L. Graber, M.D.

His present medications include basal insulin infusion at 14 units per day, and an additional 12 units daily divided into boluses before each meal and before snacks; digoxin (Lanoxin) 0.125 mg daily; furosemide (Lasix) 80 mg three times daily; hydralazine (Apresoline) 50 mg three times daily; aluminum hydroxide (Alternagel) 30 cc three times daily; and propranolol (Inderal) 160 mg three times daily. Over the last six months the marked decrease in insulin requirement characteristic of uremia has occurred. This is felt to be due to the role of the kidney in insulin degradation, decreased food intake, and other metabolic abnormalities in uremia.¹⁻³

Rick Gibson, M.D. (nephrologist): It is well known that diabetic retinopathy seems to worsen with hemodialysis and for that reason peritoneal dialysis has been tried on this man, though chronic protein loss may be a limiting feature.⁴ A complication in use of peritoneal dialysis in an insulin-dependent diabetic is the large amount of glucose used in the dialysate. We estimate the approximately 17 gm of glucose absorbed from a 2-liter bottle of 1.5% dialysate requires 8 to 16 units regular insulin in the dialysate. If a 4.25% dialysate were used, as is frequently needed in this patient to remove excess fluid, about 20 to 26 units of insulin has empirically been found necessary.

Hemodialysis would require about four hours at least three times weekly (12 hours per week), and vascular access. Intermittent peritoneal dialysis requires about 40 hours per week, but it can be done at night at home while the patient is sleeping. It requires a permanent catheter in the peritoneal cavity, with the resultant risk of peritonitis, but since this is related to technique, if technique is good we do not expect peritoneal infection. The peritoneal catheter is implanted beneath the skin with a dacron cuff into which

(Continued on page 123)

CAT Scan of the Month

LAWRENCE WRUBLE, M.D.; STEVE PRIDGEN, M.D.; GWIN ROBBINS, JR., M.D.;
WILLIAM FLOWERS, M.D.; and STEPHEN GAMMILL, M.D.

A 79-year-old man was in amazingly excellent health until the day of admission to the hospital. While at work he developed acute anterior chest pain and drove himself to the hospital. Evaluation in the emergency room disclosed hypotension and cardiac arrhythmias on an electrocardiogram. He was also thought to have been in congestive heart failure. A diagnosis of myocardial infarction with resultant congestive heart failure was made, but his cardiac enzymes were normal.

A roentgenogram of the chest showed mediastinal widening, and a gastrointestinal series disclosed a large hiatal hernia, with the majority of the stomach located above the diaphragm. In addition, a collection of fluid mixed with air abutted the stomach in both the chest and abdomen. Please examine Figures 1 and 2, CAT scans of the lower chest and upper abdomen, and see if you can arrive at the diagnosis. The pancreas is not shown on these films but was normal on others.

Discussion

Note the collection of air-containing fluid in the lesser sac, medial to the stomach and extending above the diaphragm posterior to the heart. We interpreted this collection of fluid as an abscess, with rupture of the esophagus or stomach as the most likely cause. We considered the diagnosis of abscess or pseudocyst of the pancreas, but, since the pancreas was normal on the CAT scan, we dismissed this diagnosis.

When the chest and abdomen were explored, greenish, thick pus was drained from the lesser sac and posterior mediastinum. The abscess extended to the right kidney and was entirely retroperitoneal below the diaphragm and was walled off in the mediastinum. A small sliding hiatal hernia was discovered, as well as a paraesophageal hernia that contained most of the stomach, the spleen, left colon, and omentum. The left hemidiaphragm was almost totally absent, probably on a congenital basis. The stomach within the hernia was edematous because it was incarcerated by the esophagophrenic ligament. No site of perforation was definitely found, as it had apparently sealed itself off. Because the abscess involved the lesser sac and mediastinum posterior to the heart,

we assumed it to be the result of a perforated stomach, or, less likely, a perforation of the esophagus.

Following drainage of the mediastinal and retroperitoneal abscess, the herniated abdominal or-

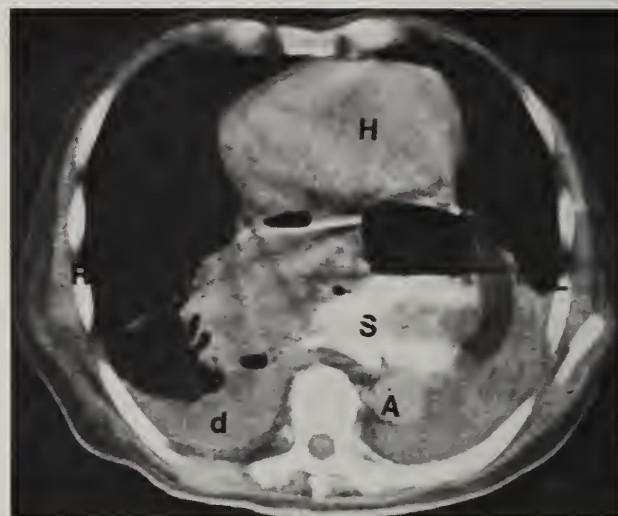


Figure 1. This scan is above the diaphragm with the heart visible anteriorly and the stomach filled with contrast material above the diaphragm. Note the collection of fluid containing air located posterior to the heart and medial to the stomach. (R = Right, L = Left, H = Heart, d = Diaphragm, S = Stomach, A = Aorta.)



Figure 2. In this scan below the diaphragm, note that the fluid (abscess) extends into the lesser sac and contains a large air fluid level anteriorly. (R = Right, L = Left, S = Stomach, s = Spleen, A = Aorta, lv = Liver.)

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gans were replaced into the abdomen, a left hemidiaphragm constructed surgically from adjoining musculature and fascia, and the chest and abdomen closed. The patient did well immediately postoperatively but developed multiple complications, including septicemia, uremia and upper gastrointestinal bleeding which collectively led to his death.

Spontaneous rupture of the stomach or esophagus almost never occurs. Because the abscess in this case apparently originated in the hiatal hernia, and extended both into the retroperitoneum (lesser sac) and mediastinum, we believe the stomach to be the most likely site of rupture. Rupture of any viscus is most often associated with acute trauma. In the case of rupture of the esophagus, the trauma is usually caused by vomiting (Boerhaave's syndrome), whereas blunt abdominal trauma usually causes rupture of the stomach. That this patient had not vomited or sus-

tained acute trauma in any form makes this a most unusual case. The wall of the stomach was probably weakened by prolonged pressure produced by respiratory motion on the stomach, with the associated sliding and paraesophageal hernias causing overcrowding and immobility. One other possibility was a perforated ulcer in the hiatal hernia, although no ulcer was found at operation or necropsy. Once the stomach ruptured, it apparently sealed itself off immediately, as no contrast material extravasated into the abscess during the gastrointestinal series. Although we suspected an abscess on the chest film and gastrointestinal series, we could not only diagnose it on the CAT scan, but in addition evaluate its extent.

FINAL DIAGNOSIS: Sliding and paraesophageal hiatal hernias, with spontaneous rupture of the stomach producing a mediastinal and retroperitoneal abscess.

Diabetes Clinical Care Conference . . .

(Continued from page 121)

the subcutaneous tissue can grow to make a seal.

Another technique, continuous ambulatory peritoneal dialysis (CAPD), is being tried experimentally, with the advantage that insulin is infused virtually continuously, similar to basal insulin secretion. Its disadvantage is distention of the abdomen, and preliminary data indicate increased risk of peritonitis.

Alan L. Graber, M.D. (endocrinologist): How is insulin absorbed from the peritoneal cavity in comparison with the usual subcutaneous or intravenous routes?

Brent Gooch, M.D. (Endocrinology Fellow—Vanderbilt Diabetes Research and Training Center): The normal individual secretes about 10 mU/kg/hr of insulin basally. After eating, there is a prompt increase of insulin secretion into the portal vein, and measurements of peripheral blood show a peak about 40 minutes after food ingestion. About 50% of insulin secreted into the portal vein is removed by the liver. If the subject receives intraperitoneal insulin, the peak appearance lags about ten minutes and the duration is somewhat longer, but the

level in peripheral blood is about the same. Therefore, the intraperitoneal administration of insulin is not very different from the physiologic mechanism, since most is absorbed into the portal system.

Dr. Graber: The patient feels and looks better after a few weeks of intermittent peritoneal dialysis.

Patient: I have been able to reduce the dosage of antihypertensive medications and furosemide, and my appetite is much improved. I am now able to eat steak and a normal amount of protein, whereas before dialysis my diet had been very low in protein.

REFERENCES

1. Rubenstein AH, Spitz I: Role of the kidney in insulin metabolism and excretion. *Diabetes* 17:161-169, 1968.
2. Block MB, Rubenstein AH: Spontaneous hypoglycemia in diabetic patients with renal insufficiency. *JAMA* 213:1863-1866, 1970.
3. Weinrauch LA, Healy RW, Leland S Jr, et al: Decreased insulin requirement in acute renal failure in diabetic nephropathy. *Arch Intern Med* 138:399-402, 1978.
4. Mitchell JC, Frohnert TP, Kurtz SB, et al: Chronic peritoneal dialysis in juvenile-onset diabetes mellitus—A comparison with hemodialysis. *Mayo Clin Proc* 53:775-781, 1978.

EKG of the Month

W. BARTON CAMPBELL, M.D.

A 58-year-old man with a previous anterior wall myocardial infarction underwent coronary arterial bypass grafting to obtuse marginal right anterior descending and diagonal coronary arteries. Preoperative electrocardiogram showed sinus rhythm, Q waves in V_1 through V_4 , and QRS duration of 0.09 seconds with borderline left axis deviation. He had longstanding chronic obstructive pulmonary disease with bronchospasm. Three days postoperatively he had increased wheezing, diaphoresis, and hypotension. He was given increased digoxin, resulting in a predose digoxin level of 1.7 ng/ml and began to have recurrent brief episodes of tachycardia at a rate of 170/min. Jugular venous pulsations could not be identified on examination. There was no discernable variation in the intensity of the first heart sound. Carotid sinus massage resulted in no change in the tachycardia. He was receiving an aminophylline drip, and the theophylline blood level was 19.5 μ g/ml. When his episodes of tachycardia increased in frequency and his bronchospasm became more severe he was placed on a ventilator with inspired O_2 of 40%. His pH was 7.30 with a PCO_2 of 55 torr and PO_2 of 82 torr. His rectal temperature was 100.8 F and potassium was 4.4 mEq/liter. Atrial pacing (with an intraatrial lead left in place following surgery) failed to ablate his recurrent episodes of tachycardia. Figure 1 is a modified lead II showing this rhythm.

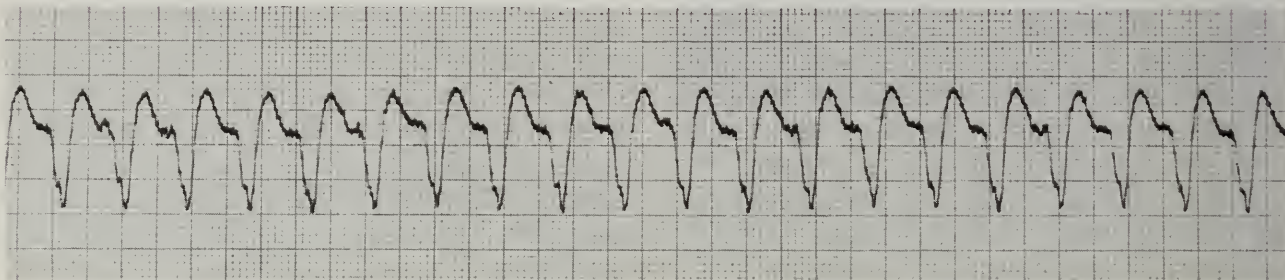


Figure 1

Discussion

A regular rhythm is present with a rate of 170/min. The QRS is 0.12 seconds in duration, with QRS forces superiorly oriented causing a QS wave in the modified lead II.

This rhythm strip showing a rapid rate with regular rhythm and wide QRS complexes represents a very common clinical problem. The difficulty is in differentiation between supraventricular tachycardia with aberration and ventricular tachycardia.

It is a commonly held belief that the duration and morphology of the QRS complex will allow distinction between ventricular and supraventricular tachyarrhythmias. Beats which are less than 0.11 seconds in duration have traditionally been categorized as supraventricular beats with aberration while those in excess of 0.11 seconds have been felt to be ventricular in origin.¹ A recent paper has suggested that the QRS duration of 0.14 seconds or more strongly favored a ventricular origin.² His bundle studies have shown that premature atrial beats may occasionally be conducted with a wide QRS complex and conversely, ventricular beats are now well known to occur with a

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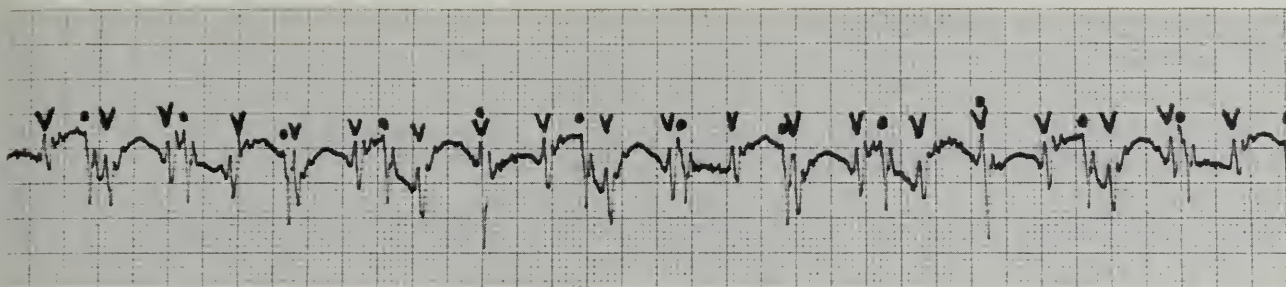


Figure 2

normal QRS variation. QRS duration is therefore not a reliable means of differentiating ventricular and supraventricular tachyarrhythmias.

It has been previously stated that an RSR' pattern in V_1 is virtually pathognomonic of supraventricular tachycardia with aberration.³ (V_1 in this patient continued to show Q waves.) A right bundle branch block pattern is quite frequent, as the right bundle is commonly the most "vulnerable" portion of the intraventricular conduction system. Most ventricular beats commonly arise from the left ventricle and also have features of right bundle branch block. It has been said that they are more commonly associated with a QR pattern in V_1 . Unfortunately, His bundle studies have made it progressively clear that QRS morphology is not reliable in differentiating supraventricular tachyarrhythmias.^{2,4}

In Figure 1 there are slight variations in the baseline (e.g., upward deflection in front of the third QRS complex), but atrial depolarization is not clearly identified in this tracing. Identification of atrial and ventricular depolarization is essential if inferences are to be drawn regarding their relationship. Approximately 50% of patients with ventricular tachycardia may have retrograde ventricular-atrial capture. In those who do not, demonstration of atrioventricular dissociation is strong evidence favoring ventricular tachycardia. (I do not distinguish between "junctional" tachycardia with AV dissociation and ventricular tachycardia.)

Physical examination may be helpful. Variation in intensity of the first heart sound with a regular rhythm suggests dissociation between atrial and ventricular contractions. Irregular cannon A waves in the jugular venous pulse suggest intermittent contraction of the right atrium in the presence of a closed tricuspid valve. (Cannon A waves may occur with supraventricular rhythms, if atrial contraction occurs while the valve is still

closed. In this case the cannon A wave should be regular in its appearance.)

Occasionally rearranging the surface electrocardiographic leads may facilitate identification of P waves. If P waves cannot be identified in this manner, an esophageal electrode or intraatrial electrode may be of great help. In this patient an intraatrial recording was obtained by connecting the left arm lead to the intraatrial electrode which had been left at the time of surgery for pacing. A rhythm strip resulted (Fig. 2).

Note the two populations of depolarizations represented on this rhythm strip. One population of beats has a rate of 170/min and is represented by a V. This is ventricular depolarization and corresponds to the QRS complex on the surface lead. The other depolarization spike represents atrial depolarization and is marked with a dot. The atrial rhythm is regular and the rate significantly slower at 108/min. There is dissociation between atrial and ventricular rates, with a faster ventricular rhythm resulting in a "marching through" of the slower atrial mechanism.

This patient was given a lidocaine bolus of 100 mg followed by a lidocaine drip at 3 mg/min. His theophylline was temporarily discontinued and he was given antipyretics. The digitalis was discontinued. He had no further episodes of ventricular tachycardia.

DIAGNOSIS: Paroxysmal ventricular tachycardia.

REFERENCES

1. Watanabe Y, Driefus LS: *Cardiac Arrhythmias. Electrophysiologic Basis for Clinical Comparison*. New York, Grune & Stratton, 1977, p 219.
2. Wellens HJJ, Frits WHM, Lie KI: The value of the electrocardiogram in the differential diagnosis of a tachycardia with a widened QRS complex. *Am J Med* 64:27, 1978.
3. Marriott HJL: Differential diagnosis of supraventricular and ventricular tachycardia. *Geriatrics* 25:11, 91-101, 1970.
4. Massumi RA, Mason DT, Fabregas RA, et al: Intraventricular aberrancy versus ventricular ectopy. *Cardiovascular Clinics, Complex Electrography I*. Philadelphia, F. A. Davis, Co, 1973.

Partial Splenic Embolization: An Alternative to Splenectomy in the Treatment of Hypersplenism

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Introduction

Classically, splenectomy has been used in the management of certain hypersplenic conditions, among them hereditary spherocytosis, thalassemia, idiopathic thrombocytopenic purpura and congestive splenomegaly. Although splenectomy does not alter the general course of these diseases it does serve in many instances to make the patients more comfortable and reduce the requirements for repeated transfusions. Since the ultimate goal of splenectomy in each of these conditions is the removal of the splenic parenchyma, it is appropriate to introduce an alternative method by which the same goal can be achieved. This method consists of partial splenic embolization (PSE).

The purpose of this report is to describe exactly how PSE is performed, with special emphasis on its risks and how they can be avoided. Although we have had no experience with its use in any of the conditions mentioned in this introduction, we have used it in six renal transplant recipients who developed leukopenia induced by intolerance to immunosuppressive therapy. Since no significant morbidity occurred in any of these patients, the technique may be of interest to those who may wish to consider its use in the management of other hypersplenic conditions.

Methods and Materials

Partial splenic embolization is mainly an extension of selective splenic arteriography. Utilizing standard angiographic techniques a 6.5 French 100-cm curved tip catheter with an end hole is placed percutaneously into the femoral artery. Under fluoroscopic control, the catheter tip is guided selectively into the splenic artery and its

tip is advanced as close to the splenic hilus as possible. Extreme caution is taken to insure that the catheter tip is advanced beyond the major pancreatic arteries. A preembolization selective splenic arteriogram is used to determine the correct position of the catheter in the splenic artery. Gelfoam particles (2 X 2 mm in size) previously soaked in an antibiotic solution of 1 million units penicillin G and 80 mg gentamicin in 100 ml of normal saline are delivered through the catheter to embolize the spleen. The progress of the embolization procedure is carefully observed under the fluoroscope to insure that each Gelfoam particle is delivered into the splenic parenchyma. When it is observed under the fluoroscope that the desired amount of spleen has been embolized a postembolization selective splenic arteriogram is obtained and the procedure is terminated. Figure 1(A-B) shows the angiographic appearance of a spleen before and after it has been partially ablated by PSE.

Patient preparation for this procedure consists of a detailed discussion of the risks and potential benefits of PSE. An informed consent is obtained; prophylactic antibiotics are administered six hours before embolization and continued for five days after the procedure.

Results

In all six patients, 60% to 80% of the spleen was ablated by the embolization procedure. All patients experienced pain during the procedure and for 24 to 48 hours thereafter. Temperature elevations of 100 F to 101 F occurred in all patients and lasted for six to eight hours. In one patient with a platelet count of 30,000 a large hematoma occurred in the right thigh following the removal of the catheter from the femoral artery. No sequelae resulted from the hematoma, which resolved completely in two months.

Pain, fever, and inguinal hematoma were the only problems encountered in the six patients un-

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dergoing partial splenic embolization for the management of hypersplenism associated with immunosuppressive therapy-induced leukopenia (WBC count below 3,000).

All patients experienced some benefit from the procedure allowing them to tolerate greater dosages of immunosuppressive medications due to more adequate control of their leukopenia.

Discussion

Hematologic changes in the WBC count and platelet count have been observed after splenic embolization,¹ and successful splenic embolization in humans with thrombocytopenia due to hypersplenism of portal hypertension has also been reported.² Others have advocated splenic embolization as a prelude to surgical splenectomy in patients with thrombocytopenia to improve hematologic status so that the operation can be performed more safely.³ Despite these reported successes, splenic embolization has not been widely used because of its associated complications, which have consisted of splenic abscess, splenic rupture, septicemia, and pneumonia.⁴⁻⁶ It is important to note that in each of these cases in which complications occurred, the whole spleen

was embolized.

Since total splenic embolization was associated with a high incidence of complications it was soon rejected as a means of controlling hypersplenism, and it was not until Castaneda et al³ showed that these complications did not occur when the spleen was only partially embolized that interest in this procedure was renewed. Soon thereafter Spigos et al⁷ published their series of 13 patients in which partial embolization of the spleen had been utilized in the management of hypersplenism without significant complications. They attribute their lack of significant complications to partial rather than total splenic embolization, strict aseptic technique and antibiotic prophylaxis, the effective control of pain, and careful postembolization care.

By embolizing only a portion of the spleen (approximately 60% to 80%) two things are allowed to occur. Firstly, some of the spleen is allowed to remain intact, which may be of benefit in providing protection from overwhelming bacterial sepsis. Secondly, partial splenic embolization might prevent development of splenic abscesses by preservation of the normal direction of the blood flow throughout the splenic circulation. In total splenic

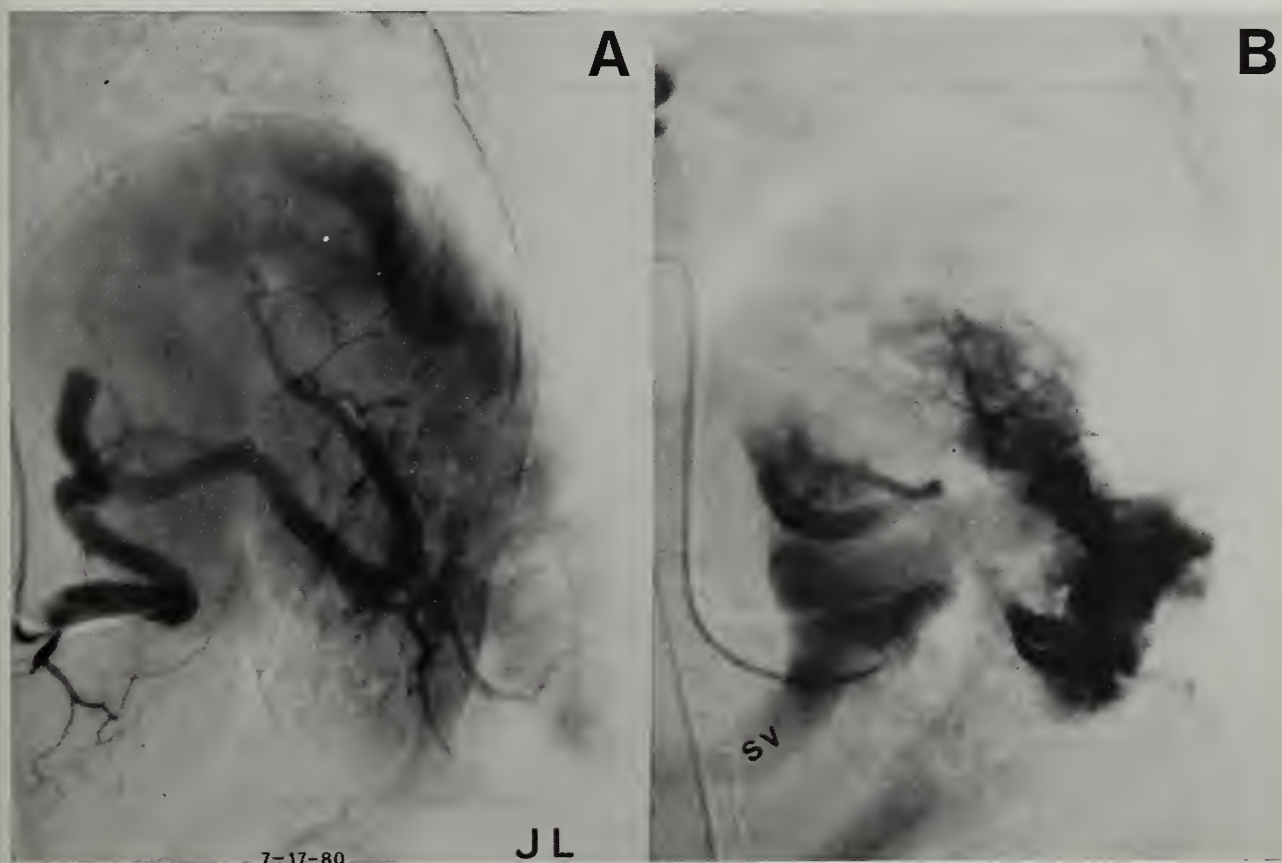


Figure 1. (A) Preembolization selective splenic arteriogram showing splenomegaly. (B) Postembolization selective splenic arteriogram showing the amount of spleen ablated by partial splenic embolization. Note preservation of the splenic vein (SV).

embolization, the arterial flow to the spleen is completely interrupted, and the direction of the flow in the splenic vein is reversed.⁸ This phenomenon might cause contamination of the infarcted splenic parenchyma with bacteria carried from the gastrointestinal tract through the portal circulation.

Since the bacteria that have been isolated most commonly from splenic abscesses are *Staphylococcus epidermidis*, *Klebsiella pneumoniae*, and *Clostridium perfringens*, a combination of antibiotics, such as penicillin-gentamicin, given systemically, should provide adequate prophylaxis. The suspension of the Gel-foam embolic particles in the antibiotic solution should also eradicate possible bacterial contamination of the splenic parenchyma.

Control of pain associated with PSE is important for minimizing some of the complications which can follow the procedure. The left hypochondrial pain which occurs leads to splinting of the thoracic cage, diminished lung expansion, and hypoventilation. Sputum retention and atelectasis result and can culminate in hypostatic pneumonia. Measures used to control pain include judicious use of narcotic analgesics, continuous epidural analgesia, transcutaneous nerve stimulation, and parenteral chlorprocaine.

Our experience, utilizing these guidelines, has supported the hypothesis that partial splenic embolization can be tolerated without the serious complications of splenic abscess, splenic rupture, septicemia and pneumonia. Since PSE causes permanent ablation of sufficient splenic parenchyma to allow subsequent improvement of the hematologic status it can be used as an alternative to splenectomy in selected patients with hypersplenism. Among its advantages are that it is relatively easy to perform, has minimal morbidity, the splenic vein is preserved, and a portion of the spleen remains intact to carry on the immunologic roles.

REFERENCES

1. Chuang VP, Reuter SR: Experimental diminution of splenic function by selective embolization of the splenic artery. *Surg Gynecol Obstet* 140:715-720, 1975.
2. Maddison F: Embolic therapy of hypersplenism. *Invest Radiol* 8:280-281, 1973.
3. Castaneda-Zuniga WR, Hammerschmidt DE, Sanchez R, et al: Non-surgical splenectomy. *Am J Roentgenol* 129:805-811, 1977.
4. Goldstein HM, Wallace S, Anderson JH, et al: Transcatheter occlusion of abdominal tumors. *Radiology* 120: 539-545, 1976.
5. Wholey MH, Chamorro H, Rao G, et al: Splenic infarction and spontaneous rupture of the spleen following therapeutic embolization. *Cardiovasc Radiol* 1:249-253, 1978.
6. Witte CL, Ovitt TW, VanWyck DB, et al: Ischemic therapy in thrombocytopenia from hypersplenism. *Arch Surg* 111:1115-1121, 1976.
7. Spigos DG, Jonasson O, Mozes M, et al: Partial splenic embolization in the treatment of hypersplenism. *Am J Roentgenol* 132:777-782, 1979.
8. Tsapogas MJ, Peabody RA, Karmody AM, et al: Patho-physiological changes following ischemia of the spleen. *Ann Surg* 178:179-185, 1973.

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GEORGE A. ZIRKLE, JR.

**president's
page**

Legislative Outlook—1981

The 92nd Tennessee General Assembly will be concerned with several legislative proposals that are important to you and your patients.

Generic substitution through repeal of the two-line prescription provision. There have been indications that there will be legislation introduced that would repeal this mechanism and would permit pharmacists to substitute at will. The TMA is opposed to this approach. This infringes on the patient-doctor relationship and could result in a patient not receiving a drug that the physician specifically wants the patient to have based on his medical judgment of the patient's condition.

Legislation will also be introduced that will repeal the "*Babes In Arms*" amendment to the *Tennessee Child Passenger Protection Act*. This amendment, added unexpectedly (on the floor of the House of Representatives), permits a child to be held in the arms of an older passenger. At 30 miles per hour the unrestrained 100 pound mother exerts 3,000 pounds of pressure against her helpless baby. This legal, but deadly, "child crusher" amendment should definitely be removed during the 1981 General Assembly. The TMA supported this law in 1977. The repeal of the "child crusher" amendment is endorsed by the Tennessee Department of Safety, the Tennessee Pediatric Society, and the Tennessee Chapter of the American Academy of Pediatrics. We can improve this nation's first child passenger legislation by making this change.

Legislation has been filed to enact a *hospital rate review commission*. TMA is opposed to this legislation. We support the voluntary effort program, which is currently operating so successfully in this state. It would be ridiculous to place a cap on hospital expenditures as long as the hospitals are at the mercy of government regulations, minimum wage requirements, etc.

Efforts by motorcycle enthusiasts will be made during this General Assembly to repeal the *Tennessee Motorcycle Helmet Law*. TMA is opposed to this. We support the Helmet Law because it saves not only lives but also hundreds of thousands of dollars in tax money for hospital costs and medical services that result from serious head injuries. Studies indicate that in approximately 70% of the injuries that result from motorcycle accidents the public ultimately pays for the medical services involved.

I hope that each of you will become interested and involved in the 92nd General Assembly with reference to pending legislation, and also can contribute your time as "doctor of the day" for our legislators during this session.

Sincerely,

PRESIDENT

Journal of the Tennessee Medical Association

PUBLISHED MONTHLY

**DEVOTED TO THE INTERESTS OF THE MEDICAL
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FEBRUARY, 1981

editorials

On Doing Your Own Thing

This year of 1980 has been a bad one for the human race, what with wars and rumors of wars and all sorts of natural disasters. It started out with Mount St. Helens' eruption, which because of its unprecedented — and unpredicted — violence took many lives. The worst hurricane in 50 years, followed by another almost as bad, cleaned out the Caribbean. A tidal wave in India swept an es-

timated hundred thousand or more lives away. And then all at once we saw a violent earthquake in Italy with a death toll in the thousands, and raging forest fires, at least one of them manmade, sweeping through Southern California, destroying a multitude of houses and even wiping out whole towns. Apocalypse now?

Not content to leave it at that, man added to the carnage with a war in the Middle East and revolutions in Central America. El Salvador (The Savior!) is a battlefield where thousands have died. Salvadorians are killing each other off at the rate of 30 or more a day; some American nuns were caught out and gunned down in the process. It is recorded that a few other missionaries wept for them, and that the incident caused a minor stir in Washington and Rome. The hostages in Iran are still hostages.

On the eve of the 1980 AMA Interim Meeting Michael Halberstam, M.D., one of the delegates to the AMA House, was murdered on the streets of our nation's capitol. He made the grave, and as it turned out, fatal error of resisting robbery. The AMA House of Delegates paused for a moment of silence, and then went on about its business. In fact, the world has gone on about its business through all of these disasters, and, except for the aggrieved, without missing a beat. We have become inured to disaster and carnage through constant exposure to it, some of it gratuitous, via the news media.

And then there was John Lennon.

For days the murder of John Lennon has occupied first — and often it seemed sole — place in the news. Accolades usually but not always just short of worship have been poured over him. Just as the drug culture which is our legacy from the Beatles swept the world, so has this international hysteria, much of it by courtesy of media irresponsibility. The cry is to do something about handguns, yet the irony is that Lennon was shot with a handgun bought in Hawaii, which has the tightest handgun control of any place in the world. This should prove that the guns of law-abiding citizens are the only guns controlled. But it will prove nothing to those convinced otherwise, who, like the news media, do not like to be confused with facts.

Murder is bad, whether it is in El Salvador, on the streets of our cities, or in one of their buildings. Death brings sorrow whether inflicted by man or nature. Mass hysteria, though, is something else again. When asked by a TV reporter why he was participating in one of the demonstra-

tions for John Lennon, one man said that, well, John Lennon just wanted to be left alone to do his own thing, and wanted everyone else to be able to do so, too. The man said he sort of felt the same way.

John Lennon's thing, even if not in recent years, was to use illegal drugs; his influence with the young and innocent led them to do the same.

Another man's thing was to kill John Lennon. To be consistent, John would have had to approve. In fairness to John, perhaps he would have.

J.B.T.

Post-Christmas Musings

One morning shortly before Christmas when I was maybe 7 or 8 years old my father explained to me that Santa Claus was not a bewhiskered red-suited philanthropic phatty, but a personification of the spirit of Christmas, a reflection of what God has done and continues to do for man, and what He consequently expects men to do for one another. I do not recall being outraged that my parents had deceived me, or experiencing any sense of loss. To the contrary, it only strengthened my gratitude toward my parents. If my dreams were shattered, I have no recollection of it.

In any case, Santa Claus serves the useful purpose of teaching one early that dreams, like New Year's resolutions, are prone to dissolve unfulfilled. This is, of course, no reason for not having dreams—or hopes, if you like that word better—for our own future and that of our children, our nation, our jobs, and so on. The extent to which these become expectations frequently parallels our developing frustrations, as life leaves a trail of unfrocked Santa Clauses.

Things are not going well at the moment in many ways for our country, for business, for the disadvantaged, for various minority groups, or for the church—denominational or individual, and I suspect that every one of you could find areas in your own personal and family life that have not lived up to your hopes—or even your expectations. God has the same problem, whether your view of Him is Christian, Jewish, Moslem, or even Hindu or “other.” If you look on God as mere “Chance,” the problem is much worse.

Since my orientation and persuasion are unabashedly Christian, I can speak only from that viewpoint. But I have to say that for a God who is

omnipotent and omniscient, He has put up with an insufferable burden of malfeasance, malediction, and malfunction from His creatures. As an omniscient God, his expectations of man can never have been very high, but His hopes for man have been boundless, and He has never given up on His wayward progeny. He even did something about it. He became involved in man's mess.

When I was small I always expected that Santa Claus would come and leave me goodies, because he always had. Others less fortunate hoped that Santa Claus would come and fill their stocking, but he seldom did. He never did unless some of those with full stockings filled those empty ones. This is Godly love, the Greek *agapé*, which gives of itself, expecting nothing in return. What, after all, can we give Santa Claus? What can we return to God other than love which expresses itself by reflecting God's love to others?

It is sad that Santa Claus leaves his home on only one evening a year, and spends the rest of his time thinking about it. That is not what God had in mind. Unfulfilled hopes and unmet expectations are with us all every day. God can of course do anything He likes. But what He likes is to have willing hands to be Santa Claus every day.

For your peace of mind, hang onto your dreams, and keep your hopes up; but as for expectations, their prognosis should be always guarded.

J.B.T.



John M. Higgason, age 63. Died December 8, 1980. Graduate of University of Arkansas School of Medicine. Member of Chattanooga-Hamilton County Medical Society.

Walter McLeod, age 56. Died December 20, 1980. Graduate of Duke University College of Medicine. Member of Washington-Carter-Unicoi County Medical Association.

Milford Thompson, age 68. Died December 23, 1980. Graduate of University of Tennessee College of Medicine. Member of Scott County Medical Society.

new members

The JOURNAL takes this opportunity to welcome these new members to the Tennessee Medical Association.

BENTON-HUMPHREYS COUNTY MEDICAL SOCIETY

W. J. Wright, M.D., Camden

BRADLEY COUNTY MEDICAL SOCIETY

Steven Kim, M.D., Cleveland

CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY

David Robert Barnes, M.D., Chattanooga

Ronald O. Hadden, M.D., Chattanooga

Woo-Gill Jeong, M.D., Chattanooga

Sarma Ranganadha Kunda, M.D., Chattanooga

CONSOLIDATED MEDICAL ASSEMBLY OF WEST TENNESSEE

Phillip H. Lucas, M.D., Jackson

William G. Trent, M.D., Jackson

FRANKLIN COUNTY MEDICAL SOCIETY

Thomas F. Zimmerman, M.D., Winchester

HAMBLETON COUNTY MEDICAL SOCIETY

Burt T. Booker, M.D., Morristown

Joo-Taek Kim, M.D., Morristown

George W. Sommers, M.D., Morristown

PUTNAM COUNTY MEDICAL SOCIETY

Evangelito C. Garingan, M.D., Cookeville

Larry B. Hudgins, M.D., Cookeville

ROANE-ANDERSON COUNTY MEDICAL SOCIETY

James E. Chapman, M.D., Oak Ridge

Anthony W. Garton, M.D., Oak Ridge

Ronald A. Sinicrope, M.D., Oak Ridge

SULLIVAN-JOHNSON COUNTY MEDICAL SOCIETY

Jack T. Bechtel, Jr., M.D., Bristol

Frederick F. Boling, M.D., Kingsport

Larry H. Cox, M.D., Kingsport

Robert C. Donaldson, M.D., Kingsport

Jere W. Ferguson, M.D., Bristol

James W. Kirksey, Jr., M.D., Bristol

William A. McIlwain, M.D., Bristol

Wendell L. Skinner, M.D., Kingsport

WASHINGTON-CARTER-UNICOI COUNTY MEDICAL ASSOCIATION

Gordon W. Moughon, M.D., Erwin

TMA Members Receive AMA Physician's Recognition Award

Seventeen TMA members qualified for the AMA Physician's Recognition Award during October and November, 1980.

To qualify for the PRA, a minimum of 150 hours of continuing medical education must be earned over a three-year period; 60 of these hours must be Category 1.

This list does not include members who reside in other states. Names of additional PRA recipients will be published as they are received from AMA.

H. R. Anderson, M.D., Nashville
Leland Langston Atkins, M.D., Memphis
Maury W. Bronstein, M.D., Memphis
Claude H. Crockett, M.D., Bristol
Roberto Felix Dominguez, M.D., Hixson
Zoila G. Dominguez, M.D., Hixson
Robert Wayne Dunavant, M.D., Bolivar
Lloyd Charles Elam, M.D., Nashville
Thaddeus Hagan Ferrell, M.D., Memphis
Charles Denis Howard, M.D., Hixson
Vartkes Kiledjian, M.D., Memphis
William H. Marsh, M.D., Chattanooga
William E. McGhee, M.D., Knoxville
Ewing William McPherson, M.D., Nashville
Benjamin A. Moeller, M.D., Memphis
Alan Marc Nadel, M.D., Memphis
Raphael Nathan Paul, M.D., Memphis

personal news

Hugh P. Brown, M.D., Chattanooga, has been elected to membership in the Pediatric Orthopaedic Study Group, a national society organized to further the advancement and study of pediatric orthopaedics.

Lloyd V. Crawford, Jr., M.D., has been elected chief of staff at Le Bonheur Children's Medical Center, Memphis, for 1981. Also elected were *Robert W. Riikola, M.D.*, secretary; and *Robert S. Hollabaugh, M.D.*, chief of staff-elect.

Allen S. Edmonson, M.D., TMA President-Elect, has been elected chief of staff at Baptist Hospital in Memphis for 1981. *Nathan Salky, M.D.*, will serve as president of the medical staff. Other officers elected

include *Robert Tooms, M.D.*, president-elect; *Rodney Elliott, M.D.*, secretary.

C. Hal Henard, M.D., Greeneville, TMA's Outstanding Physician of the Year for 1980, was presented a plaque of appreciation from the Board of Governors of Shriners Hospital for Crippled Children in Greenville, S.C.

C. A. Stilwell, M.D., Franklin, has been certified as a Diplomate of the American Board of Pediatrics.

John T. Van Dyck, III, M.D., Paris, has been named a Fellow of the American Academy of Ophthalmology.

The following TMA members have been named Fellows of the American Academy of Family Physicians: *Catherine Altman Boatwright, M.D.*, Chattanooga; *James Kelley, M.D.*, Columbia; *Michael A. McAdoo, M.D.*, Milan; *Jerry L. Shipley, M.D.*, Livingston.

The following TMA members have been certified as Diplomates of the American Board of Family Practice: *Robert R. Casey, M.D.*, Sweetwater; *William L. Harvey, M.D.*, Sweetwater; *Charles H. Webb, M.D.*, Tullahoma; *R. L. Wilson, M.D.*, Henderson; *Coulter S. Young, M.D.*, Manchester.

The following TMA members have been named Fellows of the American College of Surgeons: *A. J. Bethurum, M.D.*, Franklin; *Andrew B. Rittenberry, Jr., M.D.*, Chattanooga.

national news

From the AMA's Office in Washington, D.C.

New Administration Faces Health Problems

The Reagan administration formally took over the reins of office with high hopes for ameliorating the nation's problems at home and abroad but with no illusions that the job will be easy. The new Congress, its ranks swelled with conservatives, met for the first time with its leaders pledging their best efforts to help Reagan carry out his legislative programs.

One of the first orders of business was confirmation of Reagan's cabinet appointments, including that of former Sen. Richard Schweiker (R.-Pa.) to be Secre-

tary of the Health and Human Services (HHS) Department.

Congress faces a heavy agenda on health.

Whether national health insurance will be seriously considered depends on whether the Reagan administration chooses to push some plan such as procompetition or catastrophic, both of which were cited favorably during the campaign.

Administration plans to deregulate aspects of health, to make economies, and possibly to eliminate some programs appear to be in the works.

Many major health programs are due to expire in the next two years and must be reauthorized by Congress. This affords the administration a timely opportunity to request major changes in them.

The list of programs requiring congressional action includes Health Services Research, Statistics and Technology; Grants to States for Health Services; Primary Health Centers; National Health Service Corps; Home Health Services; Primary Care Research and Demonstration Projects; Medical Libraries; National Research Institutes; Health Research and Teaching Facilities and Training of Professional Health Personnel; Student Assistance; Capitation Grants to Schools of Medicine, etc.; Nurse Training; Family Planning; Genetic Diseases; Sudden Infant Death Syndrome; Hemophilia; Health Maintenance Organizations; Health Planning; Health Resources Development; Health Information and Health Promotion; President's Commission on Ethics and Research; Developmental Disabilities Protection; and Alcohol and Drug Abuse Programs.

The last Congress failed to act on important bills that carry over into the new session. The HHS Department appropriations measure and aid-for-medical-education are the two major bills in this category. The Child Health Assurance bill, a priority of the Carter administration, may be put on the shelf in the new Congress, though there is still substantial support. The Hospital Cost Containment bill is beyond salvage.

The Medical Education bill may face rough scrutiny. Both House and Senate last year approved measures reducing capitation aid for medical schools, but they could not agree on specifics.

Health maintenance organizations are worried that their allotments from the government will be pared. The National Health Service Corps comes under an HHS Secretary in Schweiker who has been very critical of its growth. The Health Planning bill awaits formidable conservative opposition.

The new membership of the two major Senate health committees was formed. The Republicans hold a two-seat edge on both groups—Senate Finance and Senate Labor and Human Resources.

Sen. Edward Kennedy (D.-Mass.) chose to become the ranking minority member of the Human Resources Committee rather than of the Senate Judiciary Committee, giving Kennedy a forum from which to

lead the opposition on health affairs. Sen. Harrison Williams (D.-N.J.), former chairman of the committee, chose to be the top Democrat on another committee.

Here is the membership of the two committees that guide most health legislation in the Senate:

SENATE FINANCE

Republicans

Robert Dole (Kans.)
Bob Packwood (Ore.)
William Roth (Dela.)
John Danforth (Mo.)
John Chafee (R.I.)
John Heinz (Pa.)
Malcolm Wallop (Wyo.)
David Durenberger (Minn.)
William Armstrong (Colo.)
Steven Symms (Idaho)
Charles Grassley (Iowa)

Democrats

Russell Long (La.)
Harry Byrd (Va.)
Lloyd Bentsen (Texas)
Spark Matsunaga (Hawaii)
Daniel Moynihan (N.Y.)
Max Baucus (Mont.)
David Boren (Okla.)
Bill Bradley (N.J.)
George Mitchell (Maine)

SENATE LABOR AND HUMAN RESOURCES

Republicans

Orrin Hatch (Utah)
Robert Stafford (Vt.)
Gordon Humphrey (N.H.)
Dan Quayle (Ind.)
Don Nickles (Okla.)
Jeremiah Denton (Ala.)
Paula Hawkins (Fla.)
Lowell Weicker (Conn.)
John East (N.C.)

Democrats

Edward Kennedy (Mass.)
Harrison Williams (N.J.)
Jennings Randolph (W.Va.)
Clairborne Pell (R.I.)
Thomas Eagleton (Mo.)
Donald Riegle (Mich.)
Howard Metzenbaum (Ohio)

On the House side, Rep. Dan Rostenkowski (D.-Ill.) assumes the chairmanship of the House Ways and Means Committee in the next Congress rather than take

a leadership Whip post. Present chairman Al Ullman (D.-Ore.) was defeated for reelection.

Schweiker To Head HHS

The nomination of former Sen. Richard Schweiker (R.-Pa.) to be Secretary of Health and Human Services (HHS) brings to the post a man widely versed in health affairs.

The 54-year-old Schweiker, who had announced last year that he would not seek reelection to the Senate, was the front runner from the start in speculation about the HHS post. Schweiker has been a close friend of Reagan since he agreed to be his vice presidential running mate in event Reagan had captured the GOP nomination four years ago.

As ranking Republican member on the Senate Labor and Human Resources Committee and on its Health Subcommittee, Schweiker has an extensive knowledge of health legislation and of the federal health structure. He has expressed strong convictions about certain aspects of health, notably reservations about the extent of aid for medical education and for the National Health Service Corps.

In an interview last summer, Schweiker said a Reagan administration will not endorse national health insurance or hospital cost containment and will move to "deregulate."

Schweiker is the author of a procompetition plan that would eliminate most of the present tax deductions for private health insurance in an effort to encourage more cost-consciousness by business and consumers.

"You certainly will see a stop to the rush to federalize things," Schweiker said. But he cautioned that reversing the trend will take time. "There is so much momentum that it will take acts of Congress to repeal some programs," he said.

Federal involvement in health has not produced solutions to the nation's health problems, he said. "We are cautious and skeptical about involving the government further. In fact, we are looking at ways to disinvolve the government."

The senator said health maintenance organizations should have their "full day in the sun," but "we should not build upon a system that favors one mode of competition over another."

As for medical schools, he said "we must give them protection if we step on the brakes. We can't leave the institutions high and dry."

Schweiker said the organizational structure at HHS is haphazard and suggested there would be moves to get the "health components working together."

Commenting on the National Health Service Corps, Schweiker said "federal support on the current scale will slow permanent solutions to physician maldistribution."

Procompetition Health Plans Favored

The nominations of Schweiker to be HHS Secretary and of former Rep. Dave Stockman (R.-Mich.) to be Director of the Office of Management and Budget brought to the cabinet two proponents of the so-called procompetition health plan.

Procompetition measures remove the current federal tax subsidy for purchase of private health insurance. People would receive tax-free rebates when they choose plans costing less than a set amount of premiums. High deductibles and coinsurance are encouraged. Most such bills before Congress include a catastrophic benefit as a requirement for private insurers. The intent is to foster competition among insurers to produce innovation and efficiency and to reduce waste. Much of the present regulatory apparatus would be stripped away, including professional standards review organizations (PSROs) and health planning.

One of the major bills before the House was sponsored by Stockman and Rep. Richard Gephardt (D.-Mo.). Sen. David Durenberger (R.-Minn.), who may be chairman of the Senate Finance Subcommittee on Health, is a procompetition backer.

Changes Proposed for HHS

The HHS Department is anticipating changes with the new administration. The agency foresees wide organizational shifts. The Reagan team has been considering proposals to bring education back into the agency, undoing the brand new Education Department that was created by President Carter. Significant changes appear inevitable at the Health Care Financing Administration (HCFA) which runs Medicare and Medicaid. There is sentiment for creation of a cabinet-level Health Department. A stronger policy role is in the works for the Public Health Service (PHS).

Former HHS Secretary Patricia Harris proposed a new structure consisting of two HHS Under Secretaries, one for health, the other for Social Security. This would help solve problems created by the present awkward arrangement under which HCFA, controlling the two largest federal health programs, is separate from the Public Health Service. Harris proposes that HCFA report to the Health Under Secretary.

Medicare-Medicaid Programs Changed

Scores of changes were made in the Medicare and Medicaid programs as a result of the passage of the Budget "Reconciliation" bill late in the congressional

"lame duck" session.

Most of the controversial provisions affecting the medical profession were dropped from the bill as were the sweeping changes in hospital reimbursement that had been approved by the Senate.

Here are some of the major provisions that were enacted:

- *Professional Standards Review Organizations* — No PSRO will be required to make records available pursuant to a Freedom of Information Act request until one year after the entry of a final court order requiring such disclosure.

- *Home Health* — Unlimited home health care benefits would be made available under both parts A and B; the three-day prior hospitalization requirement would be eliminated; the \$60 deductible under part B would be waived; occupational therapy would be added as a benefit criteria, and the state licensing requirement would be waived.

- *Alcohol* — Medicare will reimburse for inpatient alcohol detoxification services in freestanding facilities meeting health and safety standards.

- *Tests* — Diagnostic tests performed on an outpatient basis in the outpatient department of a hospital or a physician's office within seven days of a patient's admission to the hospital would be reimbursed in full.

- *Rehabilitation* — Permits reimbursement under Medicare for comprehensive outpatient rehabilitation facilities under part B based on the costs incurred in furnishing covered services, including physicians' services, nursing care, physical therapy, occupational therapy, speech pathology, respiratory therapy, social and psychological services, prosthetic devices, drugs and biologicals, supplies, appliances, equipment, and other items which are necessary for the rehabilitation of the patient.

- *Outpatient Surgery* — Medicare reimbursement is authorized for the facility cost of ambulatory surgical centers where the ambulatory surgical center has agreed to accept assignment. This reimbursement would be available in situations where the center performed certain procedures that are considered "safe" and "appropriate" in an outpatient setting. The physician's reasonable charge for performing the procedures would be reimbursed at 100%, providing the physician also agrees to accept assignment. A physician who accepts assignment will receive additional Medicare reimbursement for performing certain listed surgical procedures in his or her office.

- *Optometrists* — Coverage for optometrists' services to aphakic patients will be provided under Medicare. A study will be conducted to determine whether Medicare should reimburse optometrist services to cataract patients.

- *Radiologists and Pathologists* — The special 100% reimbursement with no deductible, for services to hospital inpatients by radiologists and pathologists, would be limited to those who agree to accept assignment for all services furnished to hospital inpatients.

• *Teaching Hospitals*—Alternate forms of reimbursement for professional services rendered by physicians in teaching hospitals are provided. Hospitals having approved teaching programs may elect to be paid for the services of those programs on a reasonable cost basis providing that all physicians involved in the teaching program elect to be paid on such a basis. Alternatively, physicians could elect to receive reimbursement on the basis of reasonable charges under part B if conditions are met.

• *Rural Hospitals*—The HHS Secretary would be authorized to apply Medicare standards to rural hospitals in a flexible manner to take into account the availability of qualified personnel, etc.

• *Transfer for Skilled Nursing Facility Coverage*—The 14-day period within which a Medicare beneficiary must be transferred from a hospital to a skilled nursing facility in order to qualify for posthospital extended care benefits would be extended to 30 days.

• *Clinical Laboratories*—Payment for laboratory services will be limited to the lower of the laboratory's reasonable charge, or the actual amount billed by the physician plus a nominal fee to cover his or her costs.

announcements

CALENDAR OF MEETINGS

NATIONAL

March 1-5 Society of Toxicology—Town and Country Hotel, San Diego
 March 1-6 American Society for Microbiology—Dallas
 March 2-6 International Academy of Pathology, United States-Canadian Division—Palmer House, Chicago
 March 5-7 American Psychopathological Association—Sheraton Center Hotel, New York
 March 7-11 American Academy of Allergy—Hilton Hotel, San Francisco
 March 8-12 International Anesthesia Research Society—Peachtree Plaza Hotel, Atlanta
 March 8-12 Society of Head and Neck Surgeons and the American Society for Head and Neck Surgeons—Hyatt Regency Hotel, Phoenix, Ariz.
 March 12-15 American Society for Regional

Anesthesia—Omni International, Atlanta

March 15-18 Neurological Society of America—Del Monte Lodge, Pebble Beach, Calif.
 March 15-21 American Society of Contemporary Medicine and Surgery—Sheraton Twin Towers Hotel, Orlando, Fla.
 March 15-21 American Society of Contemporary Ophthalmology—Sheraton Twin Towers Hotel, Orlando, Fla.
 March 23-25 American Society of Abdominal Surgeons—National Study Center for Continuing Medical Education, Tampa, Fla.
 March 23-27 American Roentgen Ray Society—San Francisco Hilton, San Francisco
 March 26-29 American Psychosomatic Society—Hyatt, Cambridge, Mass.
 March 27-28 AMA Hospital Medical Staff Leadership Seminar—Hyatt Regency, Peachtree Center, Atlanta
 April 1-4 American Burn Association—Sheraton Washington Hotel, Washington, D.C.
 April 3 American Association of Certified Allergists—Sheraton Washington Hotel, Washington, D.C.
 April 4-8 American College of Allergists—Sheraton Washington Hotel, Washington, D.C.
 April 5-9 American Association of Neurological Surgeons—Sheraton Hotel, Boston
 April 5-9 American Society of Neuroradiology—Marriott Hotel, Chicago
 April 6-9 American College of Physicians—Crown Center, Kansas City, Mo.
 April 6-10 American Psychoanalytic Association—Condado Beach-La Concha Hotels, San Juan, Puerto Rico
 April 10-15 American Medical Society of Alcoholism—Fairmont Hotel, New Orleans
 April 12-17 American Association of Immunologists—Hyatt Regency, Atlanta
 April 12-17 American Association of Pathologists—Hyatt Regency, Atlanta
 April 12-17 American Society for Pharmacology and Experimental Therapeutics—Atlanta
 April 22-30 American College of Obstetricians and Gynecologists—Las Vegas Hilton
 April 22-24 American Surgical Association—Hyatt Regency, Chicago
 April 23-25 American Cancer Society—Washington Hilton Hotel, Washington, D.C.

April 23-25 Congress on Medical Education — Palmer House, Chicago

April 24-26 American Society for Clinical Nutrition — San Francisco Hilton

April 24-26 International Eye Congress (Metro Eye and Ear Hosp) — Hyatt Regency, Atlanta

April 25-27 American Federation for Clinical Research — San Francisco Hilton

April 26-29 American Fracture Association — Regency Hyatt House, Indianapolis

April 26-29 West Virginia Academy of Ophthalmology and Otolaryngology — Greenbrier, White Sulphur Springs, W.Va.

April 26-May 1 American Occupational Medical Association — Hilton Hotel, Atlanta

April 28-May 2 American Pediatric Society — San Francisco Hilton

April 29-May 2 American Pediatric Surgical Association — Innisbrook, Tarpon

April 30-May 2 American Geriatrics Society — Boston Park Plaza, Boston

April 30-May 2 American Society of Clinical Oncology — Sheraton Hotel, Washington, D.C.

English Surgeons To Meet In Nashville

The Surgical Specialists Society, a group of English consulting surgeons, will hold their fifth annual meeting, dealing primarily with gastrointestinal and colorectal topics, at St. Thomas, Vanderbilt, and Park View Hospitals, Nashville, March 24-28.

APRIL 1981						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	7	8	9	10	11
			TMA 146TH ANNUAL MEETING Hyatt Regency Hotel — Knoxville			
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	NOTES	



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Since whipworm, roundworm and hookworm are all soil-borne helminths, mixed infections are not uncommon. Only one anthelmintic exhibits high efficacy rates for all three nematodes: whipworm—68%; roundworm—98%; hookworm—96%. That agent is VERMOX[®].

Please see following page for Summary of Prescribing Information.

Broad-spectrum coverage in mixed helminthic infections

Vermox[®] TABLETS
(mebendazole)



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New Brunswick, N.J. 08903

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because so much remains to be done.*

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JPI-023



**Broad-spectrum
coverage in mixed
helminthic infections**

TABLETS
Vermox[®]
(mebendazole)

Contraindications VERMOX is contraindicated in pregnant women (see: Pregnancy Precautions) and in persons who have shown hypersensitivity to the drug.

Precautions PREGNANCY: VERMOX has shown embryotoxic and teratogenic activity in pregnant rats at single oral doses as low as 10 mg/kg. Since VERMOX may have a risk of producing fetal damage if administered during pregnancy, it is contraindicated in pregnant women.

PEDIATRIC USE: The drug has not been extensively studied in children under two years; therefore, in the treatment of children under two years the relative benefit/risk should be considered.

Adverse Reactions Transient symptoms of abdominal pain and diarrhea have occurred in cases of massive infection and expulsion of worms.

Dosage and Administration The same dosage schedule applies to children and adults. The tablet may be chewed, swallowed or crushed and mixed with food. For the control of pinworm (enterobiasis), a single tablet is administered orally, one time.

For the control of roundworm (ascariasis), whipworm (trichuriasis), and hookworm infection, one tablet of VERMOX is administered, orally, morning and evening, on three consecutive days.

If the patient is not cured three weeks after treatment, a second course of treatment is advised. No special procedures, such as fasting or purging, are required.

* Mean cure rate of VERMOX[®] in treating whipworm; cure rate range of 61-75%. Data on file at Janssen Pharmaceutica Inc.

** Mean egg reduction of VERMOX[®] in treating whipworm; egg reduction range of 70-99%. Data on file at Janssen Pharmaceutica Inc.

† Rollo, I.M.: Drugs used in the chemotherapy of helminthiasis, in Goodman, L.S.; and Gilman, A. (eds.): *The Pharmacological Basis of Therapeutics*, ed. 5. New York, Macmillan, 1975, p. 1034.

†† Miller, M.J.; Krupp, I.M.; Little, M.D.; Santos, C.: Mebendazole an effective anthelmintic for trichuriasis and enterobiasis. *JAMA* 230 (10): 1412-1414, Dec. 9, 1974.

1. Registered trademark of Merck Sharp and Dohme.
2. Registered trademark of Roerig.
3. Registered trademark of Parke-Davis.



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The continuing medical education accreditation program of the TMA has full approval by the Council on Medical Education of the AMA. An accredited institution or organization may designate for Category 1 credit toward the AMA Physician's Recognition Award those CME activities that meet appropriate guidelines. If you wish information as to how your hospital or society may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203.

IMPORTANT NOTICE

Published in this section are all educational opportunities which come to our attention which might be of interest to our membership. As some of these are very long, full year schedules, and others are detailed descriptions of courses, in order to conserve space, most of them will be published in only one issue of the Journal.

IN TENNESSEE

VANDERBILT UNIVERSITY SCHOOL OF MEDICINE

Clinical Training Program For Practicing Physicians

Opportunities for advanced clinical education for physicians in family practice and in various subspecialties have been developed by the School of Medicine and the Division of Continuing Education of Vanderbilt University. The practicing physician, with the guidance of the participating department chairman, can plan an individualized program of one to four weeks to meet recognized needs and interests. The experience will include contact with patients, discussion with clinical and academic faculty, conferences, ward rounds, learning individual procedures, observing new surgical techniques, and access to excellent library resources. Experience in more than one discipline may be included.

Participating Departments and Divisions

Allergy & Immunology	Samuel Marney, M.D.
Anesthesiology	Bradley E. Smith, M.D.
Cardiology	Gottlieb C. Friesinger, III, M.D.
Chest Diseases	James D. Snell, M.D.
Clinical Pharmacology	John A. Oates, M.D.
Dermatology	Lloyd King, M.D.
Diabetes	Oscar B. Crofford, M.D.
Endocrinology	David Rabin, M.D.
	David N. Orth, M.D.
Gastroenterology	Steven Schenker, M.D.
General Internal Medicine	W. Anderson Spickard, M.D.
Hematology	Sanford B. Krantz, M.D.
Infectious Diseases	Zell A. McGee, M.D.

Medicine	Grant W. Liddle, M.D.
Neurology	Gerald M. Fenichel, M.D.
Obstetrics & Gynecology	Lonnie S. Burnett, M.D.
Oncology	Robert Oldham, M.D.
Orthopedics	Paul W. Griffin, M.D.
Pathology	William H. Hartmann, M.D.
Pediatrics	David T. Karzon, M.D.
Psychiatry	Marc H. Hollender, M.D.
Radiology	A. Everette James, Jr., Sc.M., J.D., M.D.
Renal Diseases	H. Earl Ginn, M.D.
Rheumatology	John S. Sergeant, M.D.
Surgery	
Cancer Chemotherapy	Vernon H. Reynolds, M.D.
General	H. William Scott, Jr., M.D.
Neurological	William F. Meacham, M.D.
Ophthalmology	James H. Elliott, M.D.
Oral	H. David Hall, D.M.D.
Pediatric	James A. O'Neill, M.D.
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Urology	Robert K. Rhamy, M.D.

Eligibility: All licensed physicians are eligible.

Administrative Fee: \$200 per week.

Credit: American Medical Association Physician's Recognition Award (Category 1) and American Academy of Family Physician's Continuing Education Accreditation.

Application: For further information and application, contact Paul B. Slaton, M.D., Director, Continuing Education, 3200 West End Ave., Suite 306, Nashville, TN 37203, Tel. (615) 322-2716.

Continuing Education Schedule

March 12-13 The Art and Science of Antihypertensive Therapy (10 hours)

For information contact Vanderbilt Continuing Education, 3200 West End Ave., Suite 306, Nashville, TN 37203, Tel. (615) 322-2716.

MEHARRY MEDICAL COLLEGE SCHOOL OF MEDICINE

Extended Continuing Education Program

Arrangements have been made with the following services and departments in the medical school to allow practicing physicians to participate in that service's activities for a period of one to four weeks. This program provides an opportunity for physicians to study in depth for a specified period. The schedule of activities is individualized in response to the physician's request by the participating department. The experience includes conferences, ward rounds, audiovisual materials and contact with patients, residents and faculty.

Participating Departments

Anesthesiology	Ramon S. Harris, M.D.
Family Practice	John Arradondo, M.D.
Internal Medicine	
Cardiology	John Thomas, M.D.
	Kermit R. Brown, M.D.
	Qamar A. Kahn, M.D.
Chest Disease	Joseph M. Stinson, M.D.
	Paul A. Talley, M.D.
	Edward A. Mays, M.D.
Dermatology	Thomas W. Johnson, M.D.
	David Horowitz, M.D.
Gastroenterology	Ludwald O. P. Perry, M.D.
	Buntwal M. Somayaji, M.D.
General Medicine	Edward A. Mays, M.D.
Hematology/Oncology	Robert S. Hardy, M.D.
Neurology	Calvin L. Calhoun, Sr., M.D.
	Gregory Samaras, M.D.
Obstetrics & Gynecology	Henry W. Foster, M.D.
Ophthalmology	Axel C. Hansen, M.D.
Orthopedics	Wallace T. Dooley, M.D.
Pathology	Louis D. Green, M.D.
	John C. Ashhurst, M.D.
Pediatrics	E. Perry Crump, M.D.
Surgery	
General	Louis J. Bernard, M.D.
Neurological	Charles E. Brown, M.D.
Thoracic and Cardiovascular	David B. Todd, M.D.
	Ira D. Thompson, M.D.
Urology	Marcelle R. Hamberg, M.D.

Fee: \$100 per week.

Credit: American Medical Association Physician's Recognition Award (Category 1). American Academy of Family Physicians Continuing Education Accreditation and Continuing Education Units by Meharry Medical College.

Application: For further information contact Frank A. Perry, Sr., M.D., Director, Continuing Education, Meharry Medical College, 1005 18th Ave. North, Nashville, TN 37208, Tel. (615) 327-6235.

EAST TENNESSEE STATE UNIVERSITY Quillen-Dishner College of Medicine

March 21	Immunology-Allergy Review
April 10-11	A Review of Pulmonary Medicine
April 24-25	Gynecologic Endocrinology: Infertility-Hirsutism-Menstrual Abnormalities
May 13	Substance Abuse in East Tennessee
May 20-	International Health Education Course
June 4	
June 4	J. Carroll Long Lecture
June 5-6	Geriatrics II—Sexuality and the Aging
July 18	Basic Science Review III: Psychopharmacology
Aug. 15	Stress in Medical Practice
Sept. 19	Advances in Laboratory Medicine
Oct. 7-9	Infection Control
Oct. 16	Pediatrics Prep III: Neonatology
Nov. 2-6	CPR: Faculty Inservice

For information contact Office of Continuing Medical Education, East Tennessee State University, Quillen-Dishner College of Medicine, Johnson City, TN 37614, Tel. (615) 928-6426, ext. 204.

UNIVERSITY OF TENNESSEE CENTER FOR THE HEALTH SCIENCES

Continuing Education Schedule

This comprehensive listing of UTCHS courses includes programs of the Chattanooga, Knoxville, and Memphis units. The codes (C), (K), and (M) indicate the continuing education unit handling the arrangements for a particular program.

March 5-6	(C)	Summer Emergencies
March 15-20	(M)	14th Annual Review Course for Family Physicians
March 16-19	(M)	Three Nights on Cardiac Auscultation
March 19-21	(C)	Emergency Disorders Demanding Early Recognition and Treatment—Las Vegas
April 2-3	(C)	Workup and Treatment of Anemia
April 5-8	(M)	Otolaryngology Allergy Course
April 23-24	(M)	12th Annual Leigh Buring Conference—The Gifted Child
April 23-24	(C)	Case Studies and Office Orthopedics
April 23-25	(K)	4th Annual Family Practice Update and Review Course
April 30-	(C)	Ultrasound and CAT Scan for Family Physicians
May 1		
May 7-8	(C)	Solving Problems in Drug Therapy
May 15	(M)	Cardiac Risk Factor Modification
May 27-30	(M)	Rhinoplasty
June 4-7	(C)	Family Medicine Review
June 4-8	(K)	3rd Annual Practical Otolaryngology Course for the Primary Care Physician
June 15-18	(C)	Infection in the Emergency Room
June 22-25	(C)	Diagnostic Radiology for the Primary Care Physician—Orlando, Fla.
July 10-12	(M)	Cardiac Emergencies—Snowmass, Colo.
Aug. 12-15	(C)	Emergencies in Obstetrics and Gynecology—Gatlinburg

Community-Based CME

Knoxville Campus

Blount Memorial Hospital; Maryville, Tenn.
Every Tuesday; 7-8 a.m. (1 hr. credit)

Jellico Hospital; Jellico, Tenn.

Monthly, third Tuesday; 7-9 p.m. (2 hrs. credit)

Morristown-Hamblen County Hospital; Morristown, Tenn.

Alternate months, third Tuesday; 6:30-8 p.m. (1.5 hrs. credit)

Sweetwater Community Hospital; Sweetwater, Tenn.
Monthly, second Wednesday; 12:00 noon (1 hr. credit)

Takoma Hospital; Greeneville, Tenn.
Monthly, dates vary; 6:30 p.m. (1-2 hrs. credit)

Memphis Campus

UPDATES IN MEDICINE

Carroll County Hospital; Huntingdon, Tenn.

McKenzie Memorial Hospital; McKenzie, Tenn.

Henry County Hospital; Paris, Tenn.

Monthly, third Monday; 6:15-9 p.m. (2 hrs. credit);
locations rotate.

If you would like assistance in planning a community-based CME program, contact the Associate Dean for CME and every attempt will be made to assist you through one of our three campuses.

For further information about any of these courses, please call the appropriate individuals below:

(C) Mr. LeRoy J. Pickles, Chattanooga
Tel. (615) 756-3370

(K) Mr. Jim Farris, Knoxville
Tel. (615) 971-3345

(M) Ms. Grace Wagner, Memphis
Tel. (901) 528-5547

or write or telephone:

Associate Dean for CME
University of Tennessee
College of Medicine
800 Madison Ave.
Memphis, TN 38163
Tel. (901) 528-5605

BAPTIST MEMORIAL HOSPITAL

Continuing Education Schedule

March 5-7 Scientific Symposium on Pituitary Disorders (cosponsored by Pituitary Foundation of America and University of Tennessee College of Medicine)

March 13-14 Cardiology Seminar

April 3-4 Gastroenterology Update—Cancer of the Gastrointestinal Tract

May 15-17 Anesthesiology Update

May 21-23 Emergency Room Medicine

All seminars are held in the Frank S. Groner Education Center Auditorium, Baptist Memorial Hospital,

1st floor, 20 S. Dudley, Memphis.

For further information contact Dr. Ken Burch, Director, Educational Support Services, Baptist Memorial Hospital, 899 Madison, Memphis, TN 38146; or call toll-free 1-800-542-6848 if located in Tennessee, or 1-800-238-6893 if located outside Tennessee, and ask for Educational Support Services.

IN SURROUNDING STATES

UNIVERSITY OF MISSISSIPPI

March 26-27 3rd Annual Neurology Spring Symposium, with special emphasis on neurological infections—University of Mississippi Medical Center, Jackson

For information contact Continuing Education, Dept. A, University of Mississippi Medical Center, 2500 N. State St., Jackson, MS 39216.

UNIVERSITY OF KENTUCKY

Mini-Residencies in Office Management Of Emotional Problems

The objective of this course is to give physicians an ideal emotional counseling technique that fits busy office practices. The technique uses a concept of emotions that is consistent with human anatomy and psycho physiology. Yet, the technique requires no more physician time or patient cost than routine evaluations of new patients. Finally, the technique is readily understandable and easy for practitioners to apply.

One, two and three week courses. Minimum of 40 hours per week. *Tuition Fee:* \$350 per week for the 1st & 2nd week of training; \$500 for 3rd week of supervised practice with patients in the Intensive RBT Treatment Program.

For further information contact Maxie C. Maultsby, Jr., M.D., Office of Continuing Medical Education, Dept. of RBT, University of Kentucky, Lexington, KY 40506.

Continuing Education Schedule

March 30-31 Medical Aspects of Sports Symposium: A Good Sports Medicine Program for Our Schools*

April 3-4 A Practical Approach to Ophthalmic Genetics*

April 10-11 Endocrinology for the Practicing Physician*

- May 17-22 12th Family Medicine Review—
Session II*
- May 28-30 General Pediatric Review*
- June 3-5 Update in Ob-Gyn*

*Presented at Hyatt Regency Hotel, Lexington, Ky.

For information contact Frank R. Lemon, M.D., Continuing Education, College of Medicine, University of Kentucky, Lexington, KY 40536. Tel. (606) 233-5161.

UNIVERSITY OF LOUISVILLE

- March 27-28 Nutrition and Cancer Update—
Louisville, Ky. *Credit:* 14.5 hours
AMA Category 1 and AAFP.

For information contact Gerald D. Swim, Assistant Dean, Continuing Medical Education, University of Louisville Health Sciences Center, Louisville, KY 40292.

SOUTHWEST ALLERGY FORUM

- March 22-25 Southwest Allergy Forum Annual Meeting—Arlington Hotel, Hot Springs, Ark. *Credit:* AMA Category 1 on an hour-for-hour basis.

For information contact Dr. Purcell Smith, Jr., General Chairman, P.O. Box 5675, Little Rock, AR 72215.

MEDICAL COLLEGE OF VIRGINIA

- April 24-26 Pediatric Springfest—Williamsburg Hilton and National Conference Center, Williamsburg, Va.

For information contact Dawn G. Mueller, M.D., MCV Station, Box 276, Richmond, VA 23298. Tel. (804) 786-9966.

NORTH ALABAMA EMERGENCY MEDICAL SERVICES AGENCY

- May 20-22 Southern Regional Conference on Emergency and Critical Care Medicine—Huntsville Hilton/Von Braun Civic Center, Huntsville, Ala. (Cosponsors: University of Alabama School of Medicine—Huntsville Program; American Trauma Society; Alabama Chapter of the American Col-

lege of Emergency Physicians; Alabama Committee on Trauma.) *Credit:* 18 hours AMA Category 1, ACEP, and AAFP. *Fee:* \$165.

For information contact Steven Hall, Box 2104, Decatur, AL 35602. Tel. (205) 353-3800.

OF SPECIAL INTEREST

ULTRASOUND AT VAIL

- March 21-28 2nd Annual Ultrasound at Vail Seminar—The Lodge, Vail, Colo.

For information write Ultrasound at Vail, P.O. Box 6093, Cherry Creek Station, Denver, CO 80206.

UNIVERSITY OF CALIFORNIA, IRVINE

- March 8-14 2nd Annual Mammoth Mountain Emergency Medicine Ski Conference—Mammoth Lakes, Calif. *Credit:* 25 hours AMA Category 1. *Fee* \$290.

For information contact Daniel L. Abbott, M.D., Medical Conferences, Inc., P.O. Box 52-B, Newport Beach, CA 92662. Tel. (714) 642-7080.

RUSH-PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER

- March 13-14 Practical Management of Common Geriatric Problems—Rush-Presbyterian-St. Luke's Medical Center, Chicago. *Credit:* 14 hours AMA Category 1.

For information contact Barbara Hansen, Office of Continuing Education, Rush-Presbyterian-St. Luke's Medical Center, 600 S. Paulina, Chicago, IL 60612. Telephone (312) 942-7095.

AMERICAN CANCER SOCIETY

- April 23-25 National Conference on Human Values and Cancer: Psychological, Social and Ethical Issues—Washington Hilton Hotel, Washington, D.C. *Credit:* 15.5 hours AMA Category 1.

For information contact Nicholas G. Bottiglieri, M.D., American Cancer Society, National Conference on Human Values and Cancer, 777 Third Ave., New York, NY 10017. Tel. (212) 371-2900.

Snuff and Chewing Tobacco Called Hazards to Health

Smokeless tobacco—snuff and chewing tobacco—causes serious health problems, says a communication in the July 11 *Journal of the American Medical Association*.

Health warnings are required on cigarette packages, but not on boxes of snuff or plugs of chewing tobacco, despite the fact that snuff may be more dangerous to the mouth and throat than cigarettes.

Some smokers who have had difficulty in breaking the addiction to nicotine have been turning to smokeless tobacco as less harmful to health than smoking tobacco. But smokeless tobacco also has hazards. Snuff causes gum disease, tooth abrasion, and leukoplakia that sometimes becomes cancerous. Chewing tobacco is even worse, causing cancers of the mouth, throat and digestive tract.

Broadcast and print media advertising feature well-known athletes and country-rock stars for various brands of snuff and chewing tobacco. The campaigns are directed at the youth market, and use of both snuff and chewing tobacco is increasing.

Label Information a Must in Battle to Control Hypertension

Consumers who want to reduce salt and total sodium intake may be handicapped by the absence of appropriate information on food labels. A book (*Sodium and Potassium in Foods and Drugs*, published by the American Medical Association) is designed to provide information about current exposure to sodium and potassium as well as present food processing practices that employ the two minerals. Considerable information is provided on sodium in foods and drugs to assist in patient education programs.

The AMA, in its recent comments to regulatory agencies, suggested that both sodium and potassium information on food labels would be of value. Should it become desirable to reduce sodium intake beyond the mere avoidance of table salt, some technological uses of sodium-containing substances might have to be modified or abandoned. Whatever specific recommendations are used, however, more must be known about the chemical content of available foods

from which choices will be made. Salt cannot be eliminated entirely. Aside from its role in imparting the characteristic flavor, salt is a common and indispensable functional ingredient, whatever the nature of the fermented food.

The chapter dealing with sodium-containing additives in processed meats asserts that recognition must be given to the fact that sodium-containing substances perform important technological functions—as well as contribute to product flavor. If it is necessary to reduce the levels of sodium in processed meats, reduction should not be done arbitrarily. Since salt is the most significant source of sodium in processed meats, and is necessary for preservation and for solubilization of meat proteins, studies should be conducted to determine minimum levels of salt that are necessary.

As to medications in the sodium-restricted diet, the prescription drugs containing sodium as a salt form are seldom a hazard for the patient even when used to treat long-term, chronic illness. The same may not be the case for over-the-counter preparations, many of which contain large amounts of sodium.

The book contains much useful information on unavoidable sources of sodium occurring naturally in foods, sodium used in processing of foods and in the so-called discretionary addition of salt in food preparation and at the table. About a third of all sodium consumed is through discretionary use of salt and seasonings.

New Treatment Shortens Time for Curing Tuberculosis

An important recent advance in treatment of tuberculosis, shortening considerably the time required to cure the disease, is reported in the June issue of the *Archives of Internal Medicine*.

Using a combination of isoniazid and rifampin, it is now possible to treat new cases of tuberculosis in nine months, with a 97% cure rate and a relapse rate of less than 1%. It also is possible to give the drugs less frequently. Cure rate is just as good when the schedule includes medication daily for only one month and then continuing at a modified dose for the other eight months.

Individuals who have relapsed from previous therapy and might be resistant to the dual drug treatment should be given other medications along with the two drugs.

The two drugs must be used together to cope with natural occurrence of mutants of the tuberculosis organism that are resistant to any effective single drug. The treatment program is now standard in both England and France, but is only recently coming into use in the United States, having been used on more than 1,000 patients in Arkansas in the past three years, with a 97% success rate and less than 1% relapse.

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*Liberian Registry
**Greek Registry



Two convenient dosage
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300 mg (peach) Scored
Tablets



Tablets imprinted with
brand name to assist in
tablet identification.



Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

CYCLAPEN®-W (cyclacillin)

Indications

Cyclacillin has less *in vitro* activity than other drugs in the ampicillin class and its use should be confined to these indications: Treatment of the following infections:

RESPIRATORY TRACT

Tonsillitis and pharyngitis caused by Group A beta-hemolytic streptococci
Branchitis and pneumonia caused by *S. pneumoniae* (formerly *D. pneumoniae*)
Otitis media caused by *S. pneumoniae* (formerly *D. pneumoniae*) and *H. influenzae*
Acute exacerbation of chronic bronchitis caused by *H. influenzae**

*Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to *H. influenzae*.

SKIN AND SKIN STRUCTURES (integumentary) infections caused by Group A beta-hemolytic streptococci and staphylococci, non-penicillinase producers.

URINARY TRACT INFECTIONS caused by *E. coli* and *P. mirabilis*. (This drug should not be used in any *E. coli* and *P. mirabilis* infections other than urinary tract.)

NOTE: Perform cultures and susceptibility tests initially and during treatment to monitor effectiveness of therapy and susceptibility of bacteria. Therapy may be instituted prior to results of sensitivity testing.

Contraindications Contraindicated in individuals with history of an allergic reaction to penicillins.

Warnings Cyclacillin should only be prescribed for the indications listed herein.

Cyclacillin has less *in vitro* activity than other drugs of the ampicillin class. However, clinical trials demonstrated it is efficacious for recommended indications.

Serious and occasional fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin. Although anaphylaxis is more frequent following parenteral use, it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with history of sensitivity to multiple allergens. There are reports of patients with history of penicillin hypersensitivity reactions who experienced severe hypersensitivity reactions when treated with a cephalosporin. Before penicillin therapy, carefully inquire about previous hypersensitivity reactions to penicillins, cephalosporins and other allergens. If allergic reaction occurs, discontinue drug and initiate appropriate therapy. Serious anaphylactoid reactions require immediate emergency treatment with epinephrine. Oxygen, I.V. steroids, airway management, including intubation, should also be administered as indicated.

Precautions Prolonged use of antibiotics may promote overgrowth of nonsusceptible organisms. If superinfection occurs, take appropriate measures.

PREGNANCY: Pregnancy Category B. Reproduction studies performed in mice and rats at doses up to 10 times the human dose revealed no evidence of impaired fertility or harm to the fetus due to cyclacillin. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, use this drug during pregnancy only if clearly needed.

NURSING MOTHERS: It is not known whether this drug is excreted in human milk. Because many drugs are, exercise caution when cyclacillin is given to a nursing woman.

Adverse Reactions Oral cyclacillin is generally well tolerated. As with other penicillins, untoward sensitivity reactions are likely, particularly in those who previously demonstrated penicillin hypersensitivity or with history of allergy, asthma, hay fever, or urticaria. Adverse reactions reported with cyclacillin: diarrhea (in approximately 1 out of 20 patients treated), nausea and vomiting (in approximately 1 in 50), and skin rash (in approximately 1 in 60). Isolated instances of headache, dizziness, abdominal pain, vaginitis, and urticaria have been reported. (See WARNINGS) Other less frequent adverse reactions which may occur and are reported with other penicillins are anemia, thrombocytopenia, thrombocytopenic purpura, leukopenia, neutropenia, and eosinophilia. These reactions are usually reversible on discontinuation of therapy.

As with other semisynthetic penicillins, SGOT elevations have been reported.

As with antibiotic therapy generally, continue treatment at least 48 to 72 hours after patient becomes asymptomatic or until bacteriologic eradication is evidenced. In Group A beta-hemolytic streptococcal infections, at least 10 days' treatment is recommended to guard against risk of rheumatic fever or glomerulonephritis. In chronic urinary tract infection, frequent bacteriologic and clinical appraisal is necessary during therapy and possibly for several months after. Persistent infection may require treatment for several weeks.

Cyclacillin is not indicated in children under 2 months of age.

Patients with Renal Failure Cyclacillin may be safely administered to patients with reduced renal function. Due to prolonged serum half-life, patients with various degrees of renal impairment may require change in dosage level (see DOSAGE AND ADMINISTRATION in package insert).

Dosage (Give in equally spaced doses)

INFECTION	ADULTS	CHILDREN*
Respiratory Tract		
Tonsillitis & Pharyngitis	250 mg q.i.d.	body weight < 20 kg (44 lbs) 125 mg q.i.d. body weight > 20 kg (44 lbs) 250 mg q.i.d.
Branchitis and Pneumonia	250 mg q.i.d.	50 mg/kg/day q.i.d.
Mild or Moderate Infections	500 mg q.i.d.	100 mg/kg/day q.i.d.
Chronic Infections	250 mg to 500 mg q.i.d.†	50 to 100 mg/kg/day†
Otitis Media	250 mg to 500 mg q.i.d.†	50 to 100 mg/kg/day†
Skin & Skin Structures	500 mg q.i.d.	100 mg/kg/day
Urinary Tract		

*Dosage should not result in a dose higher than that for adults.
†depending on severity

Wyeth Laboratories
Philadelphia, Pa 19101

Estrogens and Endometrial Carcinoma

A. W. DIDDLE, M.D.; W. H. GARDNER, M.D.; P. J. WILLIAMSON, M.D.;
J. R. JOHNSON, M.D.; J. L. HEMPHILL, M.D.; and C. W. GODWIN, M.D.

For nearly 50 years a vacillating controversy has continued concerning the potential risk of endometrial carcinoma for women treated with estrogens. Varying opinions from different investigators have confused both patients and physicians, particularly since 1974. Heretofore most observations were collected in clinical centers. In contrast, this retrospective study relates to a captive group of private menopausal and postmenopausal patients treated with estrogens. Results are compared with some of those recorded in the literature.

Subjects

There were 5,046 women 50 years old or older seen between Sept. 1, 1948, and Jan. 1, 1979. Three hundred twenty-one were excluded, 262 because they had had a genital cancer before the age of 50 years; for the other 59 data were incomplete. Of the remaining 4,725 women, 2,558 had a uterus and 2,017 did not. The 2,558 were the subjects of this study (Table 1). Most patients were white (98%); the remainder were of other races. Nearly all were of middle socioeconomic class.

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From the Memorial Research Center and Hospital, University of Tennessee, Knoxville.

Reprint requests to 402 Fort Sanders Professional Bldg., Knoxville, TN 37916 (Dr. Diddle).

Eleven percent of both users and nonusers of estrogen were nulligravid, and another 17% in both series had had one pregnancy. All the other conceived two or more times.

Methods

All patients had a physical examination, including weight, blood pressure, urinalysis and Pap smear. These studies were generally repeated annually for those women remaining in our care.

Patients given conjugated estrogens took the drug cyclically three out of each four weeks. The usual dose was 0.625 mg (91%), although a small number of patients (9%) took either 1.25 mg of conjugated drug, or 1 mg estrone or 0.5 mg diethylstilbestrol. The length of treatment 1.5 years or more is recorded in Table 2. Women treated more than four to five years generally were on an antiosteoporotic regimen prescribed by their internist or orthopedist.

Endometrial biopsy or uterine curettage was done whenever abnormal uterine bleeding occurred. Over the last ten years we have gradually reached the point where all women on prolonged estrogen therapy have annual suction biopsy of the endometrium.

For this resume, obesity is defined as 20% overweight. Calculations were made according to the tables of Build and Body Study 1959, Society of Actuaries.

Linder and Grove's¹ method was applied to all

appropriate data for age adjustment. The procedure of Mantel and Haenszel² was used in comparing adjusted rates. Statistical significance of all crude data was determined using the chi-square test of independence and the chi-square test of significant differences among proportions. Relative risk was calculated by the method outlined by Bancroft.³

Results

Incidence of Carcinoma

The crude incidence of endometrial cancer among all users of estrogen per 100 woman years was 4.3, and for all nonusers 2.3. For those with a uterus the risk for endometrial carcinoma was 2.1 times ($P=.005$) greater for users than for nonusers of estrogens. The respective age-adjusted rates were 5.8 and 4.5 per 100 woman years (Table 1).

The increase in number of patients with endometrial cancer according to calendar year reflects a greater load of patients and a greater number of older patients, not an increased incidence of the disease (Table 3).

We were unable to document a significant difference in the incidence of cancer according to the duration of use of estrogens, either for detailed groups or groupings less than 10 years or more than 11 years (Table 2). Nearly all the women who took estrogens and eventually developed endometrial carcinoma had used the drug up to the time signs of cancer appeared.

Gravidity and Cancer

One third of the women with adenocarcinoma of the endometrium were nulligravid in both the treated and untreated series. Contrast this figure to 11% of all the patients in both series who were nulligravid.

Pathology

More than two thirds of the neoplasms (21 of 27) among the treated women were well differentiated histologically and were classed as either International Grade O or I lesions. Contrariwise, more than half of the cancers in the untreated women were undifferentiated or advanced growths (Table 4). One of the treated women with a stage II lesion disregarded abnormal uterine bleeding for one year before seeking consultation. The woman with the stage III lesion delayed consultation and then refused treatment after a correct diagnosis was made.

Among the 27 treated women with cancer, there was one instance where several pathologists could not agree whether the lesion represented atypical adenomatous hyperplasia or frank carcinoma. The majority were of the opinion the lesion was an early carcinoma, while the minority ruled the lesion a benign adenomatous change.

The outcome of patients with cancer at this reporting is shown in Table 5.

Diabetes Mellitus, Hypertension and Obesity

There was no difference in the incidence of endometrial carcinoma among users or nonusers of estrogen who had diabetes mellitus or hyper-

TABLE 1

AGE OF WOMEN WITH A UTERUS RELATED TO USE OF ESTROGENS
AND ENDOMETRIAL CARCINOMA

Age	Patients Who Received Estrogens			Patients Who Did Not Receive Estrogens		
	Total	No. (%) With Cancer	No. Without Cancer	Total	No. (%) With Cancer	No. Without Cancer
50-55	182	6 (2.8)	176	889	25 (1.8)	864
56-60	136	6 (3.3)	130	471	18 (2.1)	453
61-65	69	6 (6.1)	63	287	21 (3.4)	266
66-70	44	8 (17.0*)	36	226	21 (3.1)	205
71-75	25	0 (0)	24	129	3 (1.6)	126
76 or more	7	1 (12.5*)	7	93	7 (2.4)	86
TOTAL	463	27	436	2,095	95	2,000

*Patients age 66 years or more at added risk.

tension. To the contrary, the relative risk for cancer among the obese was 5.0 times ($P = .05$) that for the nonobese irrespective of whether they did or did not take estrogens.

Breast Carcinoma

The incidence of carcinoma of the breast was similar for both treated and nontreated women. This agrees with the experience of Burch and others.⁴

Menopausal Age and Endometrial Carcinoma

The menopausal age for both treated and untreated patients showed a bell type curve, with the greatest number of patients ceasing menstruation at age 50 years. The range for both series was 38 to 59 years inclusive. Eleven treated and 21 untreated women ceased menstruation at age 55 to 60 years. Three of these women in each series acquired endometrial carcinoma, a more significant rate in the treated series.

Follow-Up

Twenty percent of the women with cancer and treated with estrogen either disregarded abnormal uterine bleeding or discharge, or they were able to purchase their medication without a medical authorization for as long as three to six years. All other patients were seen annually.

Comment

There is considerable difference of opinion recorded regarding the chronic use of estrogens by menopausal and postmenopausal women who acquired endometrial carcinoma. Controversy relates to statistical methods used to present data, selection of patients, and the problems of differentiating between early endometrial carcinoma and benign hyperplasia. Those rendering an affirmative opinion about the relationship of estrogen and cancer note that use of the drug, particularly ten years or longer, increases the risk for abnormal growth.⁵⁻¹¹ They also point to the fluctuating incidence with the mass sale of estrogens.¹² The end result appeared to depend on dosage and length of treatment.

Those who oppose the above opinions believe the exact catalytic agent has not been identified,¹³⁻²⁰ and that estrogen is of secondary importance. There is some credence to the idea. For instance, women who have had their ovaries removed at a relatively early age, and who have never received estrogens, occasionally acquire endometrial carcinoma in their later years. In ad-

TABLE 2
RELATIONSHIP OF LENGTH OF TIME ON ESTROGENS AND ENDOMETRIAL CARCINOMA

Years on Estrogens	Total Patients Treated	No. With Cancer	No. Without Cancer
1.5-5	231	14	217
6-10	168	7	161
11-15	38	5	33
16 or more	7	1	6
Time?	19	0	19
TOTAL	463	27	436

TABLE 3
NUMBER OF PATIENTS WITH ENDOMETRIAL CARCINOMA BY YEARS

Years	No. of Patients on Estrogens	No. of Patients Not on Estrogens
1950-1955	0	10
1956-1960	1	6
1961-1965	2	24
1966-1970	1	13
1971-1975*	11	14
1976+*	12	28
TOTAL	27	95

Adjusted Rate for Users = 5/100

Adjusted Rate for Nonusers = 2.1/100

$P < .005$

*Increase not real, but reflects referral from much larger area and increased number of older women.

TABLE 4
ESTROGENS AND STAGING OF ENDOMETRIAL CARCINOMA

International Stage	No. of Patients on Estrogens	No. of Patients Not on Estrogens
O	3	9
I*	—	18
IA	15	12
IB	5	20
II	3	15
III	1	11
IV	0	8
?	0	2

*Intracavitary radium used before surgery precluded differentiating between IA and IB.

ESTROGENS AND CANCER/Diddle

dition, it is estimated that if all tissue from users of estrogens on which a diagnosis of carcinoma was made were reevaluated by more expert pathologists, about 20% of the cases of malignancies would be reclassified as benign.¹² Nevertheless, most in both camps agree that the treated women have less anaplastic and more often less advanced cancers than do treated women.²¹ This may reflect, however, only better monitoring of the former's case than the latter's.

There are no uniform criteria to differentiate accurately between benign adenomatous hyperplasia, early atypical hyperplasia, and early carcinoma.²² One of our cases serves as an example of the difficulty in establishing a correct diagnosis.

It is believed that the relation of diabetes mellitus and hypertension to endometrial carcinoma is only an indirect one reflected through the main factor—obesity.^{12,17,18,23} In general there is acceptance that adipose tissue serves as a repository for estrogen. Great obesity increases the storage of estrogen and accentuates the predisposition to endometrial carcinoma.^{12,24}

Opposing most of the statements made above is that of Salmi.²⁵ In one of the most thoroughly studied and largest series on record comparing the incidence of endometrial carcinoma related to use of estrogen, he found no significant difference in treated and untreated women. He

theorized that the kind of estrogen might be a factor in the difference in his experience and that in other countries. Salmi used unconjugated estrogens, whereas nearly everyone else has used the conjugated form of the drug.

For nearly a half century it has been recognized that nulligravidas more commonly than previously gravid women have endometrial carcinoma. Still, nulligravidas with carcinoma are frequently obese, and the question persists as to which is more important: obesity, nulligravidity, or the combination of the two.

It is not within the province of this discussion to dwell on the beneficial effects of estrogenic therapy, but it is worthwhile to repeat Gordan's statement,²⁶ which is that a much greater number of postmenopausal women may die of complications from a fracture of hip or vertebra due to osteoporosis related to estrogenic deficiency than will die from endometrial carcinoma associated with the use of estrogens.

At this reporting, the degree of danger estrogens may contribute to the development of endometrial carcinoma has not in our opinion been established.²⁷⁻²⁹ Nevertheless, until the controversy is clarified one way or another, we suggest a system of monitoring the use of estrogens in older patients. Endometrial sampling at the beginning of treatment and annually thereafter or any time abnormal uterine bleeding occurs is recommended. Generally, this can be done in the office by suction biopsy. Pap smears

TABLE 5
CAUSE OF DEATH—ESTROGENS AND ENDOMETRIAL CARCINOMA

Estrogen Users			Estrogen Nonusers		
Total Patients	Deaths		Total Patients	Deaths	
27	endometrial cancer	2	95	endometrial cancer	13
	stage III —1			stage IB—1	
	stage IIB—1			stage II —2	
				stage III —3	
	stroke	1		stage IV—7	
				rectal cancer	1
				breast cancer	1
				stroke	3
				diabetes mellitus	1
				lost to follow-up	1
	TOTAL	3		TOTAL	20

are valuable only if positive. We are not enthusiastic about the use of uterine washings. Where the above procedures provide inadequate information, dilatation and curettage may be required.

The smallest dose of estrogen that gives symptomatic relief should be used. A progestin is given in the amounts of 10 mg daily for seven to ten days at the end of each monthly cycle of therapy, as progesterone tends to preclude the undesirable endometrial changes attributable to estrogens.³⁰ As obese women and nulligravidas are an added risk for carcinoma, use of estrogens in their case is minimized or discouraged.

Since endometrial and mammary carcinomas tend to occur in the same patient, a proper gynecologic examination should always include the breasts as well as the pelvic area.

Acknowledgments:

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REFERENCES

1. Linder FE, Grove RD: *Vital Statistics Rates in the United States 1900-1940*. Washington, D.C., US Government Printing Office, 1943.
2. Mantel N: Chi-square tests with one degree of freedom; extensions of the Mantel-Haenszel procedure. *J Am Stat Assoc* 58:690, 1963.
3. Ipser J, Feigl P: *Bancroft's Introduction to Biostatistics*, ed 2. New York, Harper & Row, 1970.
4. Burch JC, Byrd BF, Vaughn WK: The effect of long term estrogens on hysterectomized women. *Am J Obstet Gynecol* 133:537, 1979.
5. Weiss NS, Szekely DR, English DR, et al: Endometrial cancer in relation to patterns of menopausal estrogen use. *JAMA* 242:261, 1979.
6. Smith DC, Prentice R, Thompson DJ, et al: Association of exogenous

- estrogen and endometrial carcinoma. *N Engl J Med* 293:1194, 1975.
7. Ziel HK, Finkle WD: Increased risk of endometrial carcinoma among users of conjugated estrogens. *N Engl J Med* 293:1167, 1975.
8. Gray LA, Christopherson WM, Hoover RN: Estrogens and endometrial carcinoma. *Obstet Gynecol* 49:385, 1977.
9. Antunes CMF, Stolley PD, Rosenshein NB, et al: Endometrial cancer and estrogen use. *N Engl J Med* 300:9, 1979.
10. Jick H: Estrogens and increased endometrial cancer: Fact or artifact? *CA-A Cancer J for Clinicians* 29:250, 1979.
11. Gusberg SB: The changing nature of endometrial cancer. *N Engl J Med* 302:729, 1980.
12. Walker AM, Jick H: Declining rates of endometrial cancer. *Obstet Gynecol* 56:733, 1980.
13. Shanklin DR: Endometrial carcinoma: Diagnostic criteria, pathogenesis, natural history and association. *Pathol Annu* 13(pt II):233, 1978.
14. Estes SS, Rimer BA: Endometrial hyperplasia: A five year study. *South Med J* 72:559, 1979.
15. Gal D, Neuhooff S, Tancer M: Endometrial carcinoma in previously ovariectomized patients. *Gynecol Oncol* 8:44, 1979.
16. Barber HRK: Update on the estrogen controversy. *The Female Patient* 4:10, 1979.
17. Horwitz RI, Feinstein AR: Alternative analytic methods for case control studies of estrogens and endometrial cancer. *N Engl J Med* 299:1089, 1978.
18. Barron BA: Exogenous estrogen and endometrial cancer: A statistical problem. *Contemp OB/GYN* 11:135, 1979.
19. Greenblatt RB: Estrogen use and endometrial cancer. *N Engl J Med* 300:921, 1979.
20. Blake C: Personal Communication, 1980.
21. Underwood PB Jr, Miller MC, Krutner A Jr, et al: Endometrial carcinoma: The effect of estrogens. *Gynecol Oncol* 8:60, 1979.
22. Koss L: Annual meeting, Pathology Section, Tenn Med Assoc, April 12, 1980.
23. Dunn LJ, Merchant JA, Bradbury JT, et al: Glucose tolerance and endometrial carcinoma. *Arch Intern Med* 121:246, 1968.
24. Takaki UK: Weight loss may reduce risk of endometrial and breast cancer. *The Female Patient* 5:44, 1980.
25. Salmi T: Risk factors in endometrial carcinoma with special reference to the use of estrogens. *Acta Obstet Gynecol Scand*, suppl 86, 1979.
26. Gordan GS, Picchi J, Roof BS: Antifracture efficacy of long term estrogens for osteoporosis. *Trans Assoc Am Physicians* 86:326, 1973.
27. Gray L: Personal Communication, 1980.
28. Keettel WC: Personal Communication, 1980.
29. Henriksen E: Personal Communication, 1980.
30. Gambrell RD Jr: The role of hormones in endometrial cancer. *South Med J* 71:1280, 1978.

APRIL 1981						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	7	8	9	10	11
			TMA 146TH ANNUAL MEETING Hyatt Regency Hotel—Knoxville			
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	NOTES	

Council on Medical Education Report I

The Fifth Pathway

(Appendix G)

Past House Action: I-79:31-43; A-79:293,338; A-78:214-253,373; I-75:66-75,267; A-75:122-179,450,167,383,457; C-71:170-171,253; A-71:281-282,330.

At the 1979 Annual Meeting, Resolution 158 was adopted by the House of Delegates. It asked that the AMA conduct a study of the "Fifth Pathway" with special attention to the effectiveness of such programs in meeting the national needs for high-quality medical care now and in the immediate future.

Background

On June 23, 1971, the Council on Medical Education adopted a policy statement concerning the entry into graduate medical education of students who had undertaken their premedical education in the United States and their medical education abroad. This policy statement was presented to the 1971 Annual Meeting of the House of Delegates as an informational item related to Resolution 42 made by the Ohio delegation; the Council policy statement included the essential elements of the Ohio resolution.

The resolution and the policy statement were referred by the House of Delegates to the Council for further study, with instructions that another report be made to the House at the 1971 Interim Clinical Meeting. The report made to the House at the 1971 Interim Clinical Meeting uses the term "fifth pathway" for the first time and notes that several years of experience will be needed in order for an objective evaluation to be made of the value and effectiveness of the new pathway. In the report, the Council states its intention to monitor the fifth pathway and to report to the House of Delegates periodically.

The term "fifth pathway" refers to one of the ways in which foreign medical graduates can become eligible for appointment to graduate medical training in the United States. The other four pathways are as follows:

1. transfer with advanced standing from a foreign medical school to a U.S. medical school and graduation from the U.S. school;
2. certification by ECFMG;
3. obtaining a full and unrestricted license to practice medicine, issued by a state or other U.S. jurisdiction authorized to license physicians; and
4. in the case of U.S. citizens, successfully passing the complete licensure examination of any state or other licensing jurisdiction in which the law or

regulations provide that a full and unrestricted license to practice medicine in that state or jurisdiction will be issued to the physician after satisfactory completion of his internship or residency in that state, without further examination. To be eligible for this route, the foreign medical graduate must have completed all the educational requirements needed to make him eligible for ECFMG certification should he choose to apply. (At the present time, this provision has very limited application.)

Report BB of the Board of Trustees presented to the House at the Annual Meeting in 1975, and adopted at the Clinical Meeting of 1975, included the following statement about the fifth pathway:

"The committee [which prepared the report] recognizes that increasing numbers of United States citizens find it impossible to enter United States medical schools. The Committee is not in a position to determine if there is a doctor shortage or oversupply in this country or if the deficit in the health care delivery system is merely a manifestation of the maldistribution of physicians. *Therefore, until this problem is resolved, the Committee recommends the use of COTRANS and the Fifth Pathway as methods of enabling such students to return to the United States for absorption in the American health system. . . .*"

[COTRANS refers to the Coordinated Transfer Application System, a program formerly provided by the Association of American Medical Colleges, which sponsored U.S. citizens studying medicine at foreign medical schools listed in the *World Directory of Medical Schools* for Part I of the National Boards and reported their grades to U.S. medical schools to which the students had made application for transfer with advanced standing. COTRANS was discontinued in 1979. The AAMC plans to offer an examination called the Medical Sciences Knowledge Profile (MSKP) for the first time in the summer of 1980. The results of this examination will also be reported to U.S. medical schools to which U.S. citizen foreign medical students wish to transfer.]

At that meeting (Annual 1975) the House of Delegates adopted Resolution 40, which follows:

RESOLVED, That the American Medical Association continue to support the fifth pathway concept; and be it further

RESOLVED, That the American Medical Association continue to encourage all U.S. medical schools to consider fifth pathway programs; and be it further

RESOLVED, That the American Medical Association urge its constituent societies to encourage state legislatures to consider enabling legislation supporting the fifth pathway concept.

Report G of the Board of Trustees, the "Final Report of the Ad Hoc Committee on Foreign Medical Graduate Affairs" adopted at the Interim Meeting in 1979, recommended that the AMA:

Continue the policy that U.S. medical schools, within the capabilities determined by each school, sponsor one year of supervised clinical experience for foreign medical students in accordance with the criteria established for such programs by the Council on Medical Education of the AMA ("Fifth Pathway").

The "Fifth Pathway" Statement

The fifth pathway statement, including modifications made from time to time and most recently on Sept. 8, 1979, follows:

1. A new pathway for entrance to approved programs of graduate medical education, other than those existing under previous policies became available as of July 1, 1971, for students who have fulfilled the following conditions:

- a. have completed, in an accredited American college or university, undergraduate premedical work of the quality acceptable for matriculation in an accredited U.S. medical school;
 - b. have studied medicine at a medical school located outside the United States, Puerto Rico, and Canada, which is listed in the *World Directory of Medical Schools* published by the World Health Organization;
 - c. have completed all of the formal requirements of the foreign medical school except internship and/or social service. Those who have completed all of these requirements including internship and/or social service are not eligible.
2. Students who have completed the academic curriculum in residence in a foreign medical school and who have fulfilled the above conditions may be offered the opportunity to substitute for an internship required by a foreign medical school, an academic year of supervised clinical training (such as a clinical clerkship or junior internship) prior to entrance into the first year of approved graduate medical education. The supervised clinical training must be under the direction of a medical school approved by the Liaison Committee on Medical Education.
 3. Before beginning the supervised clinical training, said students must have their academic records reviewed and approved by the medical schools supervising their clinical training and must attain a score satisfactory to the sponsoring medical school on a screening examination or procedure acceptable to the Council on Medical Education. The Council on Medical Education will consider the acceptability of any screening examination or procedure proposed by a sponsoring medical school.
 4. Said students who are judged by the sponsoring medical schools to have completed successfully the supervised clinical training are eligible to enter the first year of approved graduate training programs without completing social service obligations required by the foreign country or obtaining ECFMG certification.
 5. The Council on Medical Education has recommended to all state boards of medical examiners that they consider for licensure all candidates who have completed successfully the supervised clinical training on the same basis as they now consider foreign medical candidates who have received ECFMG certification.

The rationale for fifth pathway programs grew out of the requirements for certification of individual foreign medical graduates for appointment to graduate medical training programs. The standard pathway to graduate training for foreign medical graduates is through certification by the Educational Commission for Foreign Medical Graduates (ECFMG). The ECFMG information booklet describes the educational requirements for certification as follows: "Applicants must have successfully completed the full medical curriculum prescribed by the (foreign) medical school and by the country in which it is located, and must have fulfilled all the educational requirements to practice medicine in the country in which they have had their medical education." Thus, if internship training is required for admission to practice in the country where the physician went to medical school, he has to complete that training or equivalent training before he can get the ECFMG certificate and begin his U.S. graduate medical education.

Mexican medical schools require that students undertake a year of social service as part of the educational requirements for receiving the *Titulo de Medico Cirujano* or the *Acta de Examen Profesional* which are the Mexican credentials comparable to the M.D. in the United States. If the social service is not performed, the credential is withheld and the individual concerned is, consequently, not eligible for ECFMG certification. The fifth pathway was designed to meet this

circumstance in Mexico and similar circumstances elsewhere. Mexico and the Dominican Republic are, so far as is known, at present the only countries where medical credentials are withheld if a medical graduate does not complete the social service requirements in the country of medical education. Social service in the Dominican Republic lasts, however, for four months rather than a year, as in Mexico. In other countries, for instance in Italy and France, medical credentials are withheld pending completion of a year of clinical training after the formal didactic training; the training may be undertaken abroad.

Countries and Schools of Medical Education

The largest number of fifth pathway physicians was educated in Mexico at the Autonomous University of Guadalajara. As of March 1980, the AMA masterfile recorded a cumulative total of 2,119 fifth pathway physicians. The following chart indicates their countries and schools of medical education:

Country of Medical Education			Medical School		
Mexico	1,947	92%	Guadalajara (MEX)	1,886	89%
Italy	47	2%	Bologna (IT)	43	2%
Philippines	46	2%	Monterrey (MEX)	16	1%
Belgium	32	2%	Far Eastern (P.I.)	17	1%
Dominican Republic	16	1%	Mexico (MEX)	16	1%
Other	31	2%	Brussels (BEL)	15	1%
			Quezon (P.I.)	11	1%
	2,119		Other	104	5%
				2,119	

Fifth Pathway Programs

Any accredited medical school can provide fifth pathway training, and some provide such training occasionally, for instance when a regular student has for some reason dropped out of a clinical year leaving a space that can be utilized by a fifth pathway student. Twenty-nine schools have informed the AMA that they provide training regularly and have asked to be included in a list that is provided to foreign medical students who request it.

Fifth Pathway Enrollments

Fifth pathway enrollments have increased steadily since 1971-72. The LCME medical school questionnaire reports the following in regard to the numbers of students completing the program:

1971-72	8
1972-73	59
1973-74	122
1974-75	191
1975-76	262
1976-77	357
1977-78	399

Fifth Pathway Laws

Forty-six of the 54 medical licensing jurisdictions license foreign medical graduates who have fifth pathway certificates but who do not have ECFMG certificates. The seven who indicate that they cannot license such physicians are Alaska, Arkansas, Delaware, Guam, New Mexico, Vermont, and the Virgin Islands.

Specialty Board Certification

Eighty-nine of the 2,119 fifth pathway physicians have been provided with specialty board certificates, primarily in family practice (52) and internal medicine (19).

The majority of specialties reported by fifth pathway physicians, including residents, is in primary care fields.

Internal Medicine	504
General and Family Practice	298
Obstetrics and Gynecology	235
General Surgery	197
Pediatrics	115
All other	770
	2,119

Summary

The fifth pathway appears to be at present a significant mechanism for entry of U.S. foreign medical graduates to medical practice in the United States. Forty-six states at present license fifth pathway physicians and these physicians report addresses in 47 of the 54 licensing jurisdictions. Twenty-nine medical schools report that they regularly provide fifth pathway training. An additional 12 schools report that they provide fifth pathway training occasionally.

As a group, fifth pathway physicians would appear not to have had premedical qualifications equal to those of U.S. medical students as a group, although some fifth pathway students assuredly did have premedical qualifications equal to those of students admitted to U.S. medical schools.

When compared to other foreign medical graduates, fifth pathway physicians would appear as a group to have better qualifications; a period of training sponsored by a U.S. medical school would seem preferable to internships or social service in a foreign country. The fifth pathway program, in addition, offers an opportunity for remedial training. In recent years, the great majority of fifth pathway students have passed the ECFMG examination as one of the qualifications for admission to residency programs. As a group, they have been successful in obtaining licenses for the practice of medicine.

The Council will continue to monitor fifth pathway programs, particularly in light of continuing concern about the equivalency of a system of medical education that is not subjected to accreditation. The Council will continue to assemble information to facilitate evaluation of fifth pathway participants and programs.

The Council on Medical Education recommends that:

1. The House of Delegates reaffirm the position adopted in 1975 by the House of Delegates to support the fifth pathway concept.
2. The AMA continue to encourage medical schools to consider providing fifth pathway programs.
3. The AMA encourage the Federation of State Medical Boards and the state medical licensing boards in licensing jurisdictions where fifth pathway physicians cannot be licensed to consider supporting enabling legislation permitting their licensure, particularly in light of the need for a degree of uniformity among states in regard to licensure.
4. The AMA recognize that individual medical schools must control the curriculum for their fifth pathway programs, and recommend that medical schools give attention to the compensatory aspect of fifth pathway training, and that, whenever possible, fifth pathway training be provided in a closely affiliated hospital rather than "off campus."

Board of Trustees Report MM

Joint Commission on Accreditation of Hospitals

(Appendix H)

Since the 1979 Interim Meeting, the AMA has initiated an in-depth analysis of the structure and the processes for accrediting hospitals and other health facilities by the Joint Commission on Accreditation of Hospitals in response to widespread criticism and concern from the members.

In a recent meeting, the Board spent considerable time in discussing the Joint Commission on Accreditation of Hospitals from the standpoint of its historical evolution, its current procedures and organization, and the future environment, as well as the effects this environment may have on the hospital, the medical staff, and the accreditation process.

In its discussions, the Board expressed concern over the expansion of the standards in the *Accreditation Manual for Hospitals* and the specificity of the language contained therein. The Board feels that a significant portion of the language tends to prescribe methods of organizing the hospital and the medical staff rather than concentrating on the quality and excellence of patient care. In many instances, the interpretative language in the standards does not allow the hospital and the medical staff enough flexibility in making decisions that are essential to the peculiarities of the locality concerning patient care. There has also been a noticeable inconsistency in the interpretation of the standards by individual surveyors. There are frequent revisions to the standards which are seldom accompanied with reasons for the changes, how they impact on the quality of patient care, and how they adhere to cost-effective principles.

In discussing the accreditation process, the Board has received comments from hospitals and medical staffs stating that they do not sense any empathy on the part of the JCAH surveyors to assist in the solution to their problems; but, instead, that many of the surveyors tend to assume a punitive attitude toward the institution. Other comments concerned the frequent increases in the cost of the survey without a commensurate improvement in the quality of the survey.

The Board has serious concerns in other areas pertaining to the overall activities of the JCAH, and it proposes the following course of action:

1. The Board will initiate meetings with the appropriate policymaking bodies of the other four corporate members to discuss its concerns relative to JCAH, to emphasize its desire to return the primary focus of the JCAH to the quality and excellence of patient care, and to explore methods of improving the voluntary accreditation process of the JCAH.
2. The Board believes that the future environment will create a demand from the public for reliable and credible quality processes, and that this same environment will create demands from the hospitals for a streamlined and efficient accreditation that is flexible, comprehensive, nonduplicative, and less costly. To meet these demands, the Board intends to:
 - a. Initiate a complete review of the "Optimal Achievable Standards" philosophy, currently in effect at the JCAH, to determine if this approach is appropriate for the hospital of the future.

- b. Recommend to the Board of Commissioners of the JCAH that the standards be rewritten to eliminate significant portions that are ambiguous and subject either to misinterpretation or various interpretations by the JCAH surveyors and hospitals, and to allow more flexibility in the implementation of the standards by the individual hospital and medical staff.
- c. Recommend to the Board of Commissioners of the JCAH that for the immediate future the major emphasis be placed on improving the quality of the survey and accreditation process in the short-term acute care hospital.
- d. Recommend to the Board of Commissioners of JCAH that it reconsider the desirability of continuing to survey long-term care facilities that are not hospital-related, both from the standpoint of finances and the ability to produce a quality product.
- e. Recommend to the Board of Commissioners of JCAH that it explore methods of streamlining the accreditation process by considering (1) the feasibility of contracting with a management firm to perform the accreditation process; (2) the feasibility of extending the present term of accreditation from two years to three or four years with interim written reports to be submitted by the hospital; (3) other alternative methods of accreditation.
- f. Recommend to the Board of Commissioners that it evaluate the appropriateness of continuing to include life safety codes in JCAH standards for hospital accreditation.

The Board will continue to analyze and to reevaluate the AMA's relationship with the JCAH, and a follow-up report will be submitted to the House of Delegates at the 1980 Interim Meeting.

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Board of Trustees Report CC
Surgeon General's Report on Health Promotion and
Disease Prevention
(Appendix I)

Past House Action: I-79:174-176,178-181,213; A-79:215-218,218-223, 223-227,295; I-78:148,149-154; A-78:284,290-291; I-77:183,186-188,188-193,194-195; A-77:216.

Resolution 98, which was adopted at the 1979 Interim Meeting, asked that the AMA commend the Surgeon General for his leadership in the area of health promotion and disease prevention and that the AMA Board of Trustees "review the Surgeon General's Report on Health Promotion and Disease Prevention and refer the recommendations to the appropriate AMA units for their review and any indicated action."

The Surgeon General's Report on Health Promotion and Disease Prevention, also entitled "Healthy People," suggests that there is an emerging consensus among the nation's scientists and the health community "that the nation's health strategy must be dramatically recast to emphasize the prevention of disease." The former emphasis of the USPHS upon the control of acute infectious diseases has been so successful that those leading causes of death in 1900 (influenza, pneumonia, diphtheria, tuberculosis, and enteric infections) have now been replaced by chronic illnesses such as cardiovascular disease, cancer, and diseases related to deleterious lifestyles. An analysis made of ten leading causes of death in 1976 estimated that contributions to mortality resulted from (1) inadequacies in health care delivery; (2) behavioral factors; (3) environmental hazards; and (4) human biological factors. It was found that as much as half of the U.S. mortality could be attributed to unhealthy behavior or lifestyle and only 10% to inadequacies in health care. The central theme of the Surgeon General's report is that the health of this nation's citizens can be substantially improved through individual commitments and through actions in the public and private sector that promote those commitments to eliminate cigarette smoking; reduce alcohol and drug misuse; reduce dietary intake of excess calories, fat, salt, and sugar; practice moderate physical exercise; partake in periodic screening for major disorders such as high blood pressure and cancer; adhere to rules of automotive safety; and enhance mental health through strengthening family ties and individual as well as community support systems.

The report reviews in some detail the risks to good health. It points out that inherited biological factors that interfere with good health cannot be readily altered, but environmental and behavioral factors are susceptible to change. In fact, at least seven of the ten leading causes of death could be substantially reduced if persons at risk improved just five habits: improper diet, smoking, lack of exercise, alcohol abuse, and poor adherence to antihypertensive medication regimens.

The Surgeon General proposed five national health goals:

- "1. To continue to improve infant health, and, by 1990, to reduce infant mortality by at least 35% to fewer than nine deaths per 1,000 live births.
- "2. To improve child health, foster optimal childhood development, and, by 1990, reduce deaths among children ages 1 to 14 years by at least 20% to

fewer than 34 per 100,000.

"3. To improve the health and health habits of adolescents and young adults, and, by 1990, to reduce deaths among people ages 15 to 24 by at least 20% to fewer than 93 per 100,000.

"4. To improve the health of adults, and, by 1990, to reduce deaths among people ages 25 to 64 by at least 25% to fewer than 400 per 100,000.

"5. To improve the health and quality of life for older adults and, by 1990, to reduce the average annual number of days of restricted activity due to acute and chronic conditions by 20% to fewer than 30 days per year for people aged 65 and older."

To achieve these goals he suggested 15 priority activities to be further developed as effective strategies. These are described in detail and can be divided into:

I. Key preventive services that can be delivered by health providers:

- family planning
- pregnancy and infant care
- immunizations
- sexually transmissible disease services
- high blood pressure control

II. Measures that can be used by governmental and other agencies to protect people:

- toxic agent control
- occupational safety and health
- accidental injury control
- fluoridation of community water supplies
- infectious agent control

III. Activities that individuals and communities can use to promote healthy lifestyles:

- smoking cessation programs
- alcohol and drug misuse prevention programs
- nutrition education programs
- exercise and physical fitness programs
- stress management techniques

The report closed with a challenge to the nation from the Surgeon General to achieve the proposed goals by 1990. It listed opportunities for action by individuals, families, health professionals, health institutions, schools, industry, communities, and government. Health professionals "have a particular opportunity and obligation to provide information and services necessary to promote better health and prevent disease. These professionals need to be trained to view themselves as educators and models, as well as practitioners. . . ." Several polls revealed that people attach great importance to the physician's recommendation when a behavioral change is indicated. Thus, the physician needs to practice good health habits to preserve his own well-being; to serve as a role model to family, patients, and community; and to better influence the behavior and therefore the health of the community.

Previous and Current AMA Activities in Health Promotion

The AMA has been committed since its inception to the promotion of health and the prevention of disease. It should suffice here to review activities and positions of the past few years, many of which are ongoing, that illustrate that commitment. These will be reviewed in order suggested by the 15 priority activities listed above.

Family Planning. The AMA cooperated with the FDA in writing the first brochure on the use of oral contraceptives.

Pregnancy and Infant Care. This has been the domain of the Committee on Maternal and Child Care of the Council on Scientific Affairs (CSA), currently the Committee on Maternal, Adolescent, and Child Health (CMACH), which has

concerned itself with issues of Parent and Newborn Interaction (CSA Report A, I-77), and improved prenatal and neonatal care for the medically indigent (CSA Report C, A-80). In an effort to explore many aspects of parenting the CMACH is holding a national workshop on teenage pregnancy in September 1980. The Department of Mental Health has held five workshops during the past four years on the mental health problems of children and adolescents.

Immunization has been the subject of many actions of the House of Delegates (Resolution 44, A-77 and 37A, I-79) and the AMA has been in close liaison with the Center for Disease Control, USPHS, and most currently has cooperated in the voluntary effort lead by Mrs. Bumpers to broaden immunization levels of school age children nationwide. The subject of vaccines for immunization is covered in *AMA Drug Evaluations*.

Sexually transmissible diseases have been the subject of a CME course put on in various regions of the country at least once a year for the past several years by the AMA Department of Environmental, Public, and Occupational Health (DEPOH).

High blood pressure control has been the subject of AMA endorsed guidelines established by the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure (*JAMA* 237:255, 1977) and by the National High Blood Pressure Education Program for the Dietary Management in Hypertension Control (CSA Report B, A-79). Drug usage in the management of high blood pressure is covered in *AMA Drug Evaluations*.

Occupational safety and health has been the subject of annual congresses sponsored by the DEPOH for the past 40 years and with the cooperation of the National Institute for Occupational Safety and Health for the past several years. Each of the recent congress proceedings has been published. Among other topics covered, the *control of toxic agents* in the workplace and in the community were dealt with in depth at the AMA congress in October 1977. For the congress scheduled for September 1980, there will be discussion of the health aspects of various energy sources and causes of reproductive impairment in the workplace. In addition, the Council on Scientific Affairs has appointed one panel to examine the health hazards of nuclear power and low-level radiation, and another panel to deal with toxic substance control.

Accidental injury control has been the main thrust of the AMA program in traffic medicine and highway safety that has been active for many years. A conference in 1977 examined the issues surrounding the use of helmets by motorcyclists. The conclusions from that conference were widely disseminated to state medical associations, public and voluntary health, safety and education associations, and served as the basis for CSA Report D (A-78) that supported the use of a full-face helmet when riding or driving a motorcycle. CSA Report E (I-77) reviewed the evidence supporting the use of air bags and seat belts in the prevention of vehicle-related injuries. CSA Report J (I-78) endorsed the "Childsafe Project of Wisconsin" and encouraged other state medical societies to develop similar programs.

Antismoking programs were encouraged in CSA Report C (A-79), which reviewed previous activities of the AMA in this area and recommended that physicians play a stronger role in discouraging cigarette smoking by their patients through several strategies. A new antismoking public service announcement aimed at pre-teens has been prepared by the Office of Public Relations and distributed to 400 major TV markets.

Alcohol and drug misuse have been the principal subjects of two separate panels of the Council on Scientific Affairs which have been responsible for preparing guidelines for physicians on marijuana misuse (CSA Report D, I-77 and CSA Report I, I-79); amphetamine use in treatment of obesity (CSA Report C, I-77); the use of barbiturates in practice (CSA Report A, A-78); the medical use of hypnotic drugs for insomnia (CSA Report G, I-79); and for preparing a revised handbook on

alcoholism and a guide for the treatment of alcoholism by physicians (CSA Report K, I-78). The alcoholism panel is also involved in disseminating information on diagnosis and treatment, including the recognition of the fetal-alcohol syndrome, through CME courses given by the AMA and appropriate specialty societies.

Impaired Physicians. With focus on physicians themselves, the Impaired Physician Program of the Department of Mental Health has dealt with the problems of recognition and control of physicians impaired by mental illness, alcoholism, and drug dependence. This active and useful program will be continued, but with a new emphasis on prevention, particularly in medical school and residency years, in response to Resolution 168 (A-79) on the well-being of physicians.

Nutrition education has been one mission of the AMA Department of Foods and Nutrition. Professional nutrition education has been stimulated by the Goldberger Scholarship in Clinical Nutrition for medical students and through frequent conferences on such topics as:

- Defined Formula Update — Amino Acids, 1977
- Metabolic Management of the Critically Ill Patient, 1978
- Sodium-Potassium in American Foods, 1979
- Western Hemisphere Nutrition Congress, 1980

This department has also contributed to the preparation by the CSA of a report on "American Medical Association Concepts of Nutrition and Health" (CSA Report D, A-79), which was in part the basis for the Surgeon General's report and for the DHHS/USDA report "Dietary Guidelines for Americans."

Exercise and physical fitness has recently been considered by a panel of the Council on Scientific Affairs which is currently revising guidelines and instructions for physicians as prepared by the earlier AMA Committee on Physical Fitness: Basic Bodywork for Fitness and Health; and Guide to Prescribing Exercises.

In addition, this panel prepared a statement adopted as a Council Report G (I-79) by the AMA House of Delegates on "Physical Fitness and Physical Education." Another CSA panel on Sports Medicine has provided annual conferences during the Annual or Interim Scientific Session for the past 20 years; they have also contributed to improved knowledge about physical fitness and exercise programs.

The AMA Auxiliary's two-year "Shape Up for Life" campaign has been promoted by all 50 of its state auxiliaries and more than half of the 1,000 county organizations. The campaign's purpose is to help keep Americans healthy by making them aware that proper diet and exercise are vital to good health and fitness. Local activities have included community forums, weight control classes, fun runs, fitness trials, nutrition seminars, and consumer education programs. Since the introduction of the program in July 1979, campaign materials distributed include 300,000 nutrition brochures, 15,000 posters, 100,000 buttons, and 30,000 T-shirt transfers.

Stress management techniques include exercise and certain sports, but the AMA has not yet become directly involved in many of the newer suggestions for managing stress: behavior modification, relaxation techniques, biofeedback, meditation, and group therapy techniques.

Thus, it can be seen that the AMA, through the activities of the CSA and certain ongoing programs of the several departments of its Division of Scientific Activities, has been very active in the areas of health promotion and disease prevention. However, these activities could be more effective if they were tied together by certain common strategies.

The Board of Trustees has asked the CSA to prepare an appropriate long-range plan that would coordinate and expand continued AMA activities in the area of health promotion and disease prevention. The CSA will be asked to respond to this request on a timely basis so that the House of Delegates can be properly informed of developments in this area.

Ideas about anxiety management are changing. Problems have surfaced. There is concern about dependence on minor tranquilizers and new findings on receptor sites in the brain. There is a trend toward short-term therapy and interest in nondrug alternatives. Because anxiety can disable, the need to treat continues in daily practice. Primary care physicians require up-to-date information. This program can provide it.

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Adjuvant Chemotherapy of Breast Cancer

A Consensus Development Conference on Adjuvant Chemotherapy of Breast Cancer was held at the National Institutes of Health on July 14-16, 1980. Its purpose was to bring together practicing physicians, research scientists, consumers and others in an effort to reach general agreement on the concepts and results of adjuvant chemotherapy trials in breast cancer and their implications for medical practice.

A consensus development panel and members of the audience considered evidence presented on the following questions:

- Have clinical trials established the efficacy of adjuvant chemotherapy of breast cancer?
- Do the benefits of adjuvant chemotherapy clearly outweigh the risks?
- Should future adjuvant chemotherapy studies include hormonal manipulations?
- What is the role of adjuvant chemotherapy in stage I patients?
- What is the role of adjuvant chemotherapy in postmenopausal patients?

The members of the panel included a patient and representatives from the many disciplines involved in the evaluation and treatment of breast cancer. The panel met following formal presentations and discussions to assess the issues based on the evidence presented. This summary is the result of its deliberations.

This conference was sponsored by the National Cancer Institute with the assistance of the Office of Medical Applications of Research, Office of the Director, National Institutes of Health.

Members of the Consensus Development Panel were Stephen K. Carter, M.D. (panel chairman), Northern California Cancer Program, Palo Alto, Calif.; George P. Canellos, M.D., Sidney Farber Cancer Institute, Boston; Barbara E. F. Chambers, consumer representative, Washington, D.C.; Sidney J. Cutler, Sc.D., Georgetown University, Washington, D.C.; Edwin R. Fisher, M.D., University of Pittsburgh; Robert W. Frelick, M.D., Association of Community Cancer Centers, Bethesda, Md.; Walter Lawrence, Jr., M.D., chairman of Commission on Cancer, American College of Surgeons; Theodore L. Phillips, M.D., University of California Medical Center, San Francisco; Hiram C. Polk, Jr., M.D., University of Louisville Health Sciences Center; Connie Henke Yarbro, R.N., Oncology Nursing Society, Columbia, Mo. Program Coordinator for this conference was Daniel G. Haller, M.D., National Cancer Institute, NIH.

Introduction

Adjuvant chemotherapy of breast cancer means the use of cytotoxic drugs after primary therapy. The rationale for adjuvant chemotherapy is to eradicate occult metastatic disease which otherwise would be fatal.

The assessment of adjuvant chemotherapy must balance efficacy against toxicity. The basic measure of therapeutic benefit is patient survival with acceptable quality of life.

Primary breast cancer is a heterogeneous disease with varying potentials for metastatic relapse and response to adjunctive drug therapy. Currently, three critical variables are used in planning adjuvant chemotherapy trials: involvement of the axillary lymph nodes, menopausal status, and estrogen receptor (ER) levels. Three axillary lymph node categories are commonly accepted as prognostically important: negative axillary nodes, one to three positive axillary nodes, and four or more positive nodes. These three categories strongly predict the risk of relapse after appropriate local treatment.

These three nodal subsets, when combined with the menopausal status (pre- or post-) and ER status (positive or negative), result in 12 prognostic subsets. These subsets form the basis for planning additional clinical trials, and it is only from these trials that the best strategy for improved patient care will emerge. Adequate analysis of an adjuvant chemotherapy trial must consider whether enough data exist for one or more subsets to establish the role of that trial in assessing — and possibly modifying — current medical practice.

In general, the merits of a new or modified adjuvant treatment regimen must be assessed through comparative clinical trials, which randomly assign patients to alternative treatments. Such a study design helps assure that patients in each of the treatment groups are comparable.

If a clinical trial is to yield meaningful information, patients need to be followed for a sufficient period, so that long-term results may be evaluated. No simple standard for duration of follow-up can be set, because the importance of observed results depends on the nature of the patient group under study. For example, in order to provide

meaningful information, patients with minimal, potentially curable disease have to be followed for a much longer time than do patients with advanced disease.

There are two types of toxicity associated with chemotherapy: acute and remote. The acute adverse effects relate to the immediate drug administration; remote adverse effects, which also can be chronic, can occur long after drug administration has ceased. Acute toxicities include bone marrow suppression, nausea and vomiting, loss of appetite, weakness, mouth ulcers and hair loss. The remote chronic effects to which the physician should be alerted include organ damage, such as Adriamycin-induced cardiomyopathy, sterility and the induction of second cancers due to the carcinogenic potential of some of the drugs used.

The length of time during which the patient is free of disease after treatment is important but frequently must be regarded as a preliminary indication of therapeutic results. The ultimate efficacy of treatment must be measured in terms of survival time, although the quality of survival must be taken into consideration.

Studies that report negative results, i.e., no significant differences, should not be regarded as failures. If the study initially posed important question(s), and the study was designed and executed properly, then any negative finding is an important contribution to knowledge.

It is desirable to examine the possible influences on therapeutic results by factors not anticipated in the original study design. However, a cautionary note is in order: retrospective observations based on small subgroups of patients may be misleading.

By definition, adjuvant chemotherapy is drug treatment added to adequate local excisional therapy. The adjuvant chemotherapy trials reported to date have employed radical or modified radical mastectomy. Future trials may involve lesser surgical procedures, but the impact of lesser surgery on adjuvant chemotherapy remains to be determined.

In breast cancer treatment, a key prognostic determinant for the use of adjunctive therapies and their results is the status of the axillary lymph nodes at the time of primary therapy. A satisfactory dissection of the axillary nodes and histopathologic evaluation are essential for accurate staging.

With these precepts underlying their discussions, the panel addressed the questions in its charge and came to the following consensus.

Have clinical trials established the efficacy of adjuvant chemotherapy of breast cancer?

Despite positive and encouraging findings from clinical trials, the answer to this question must be qualified at this time. The value of adjuvant chemotherapy, in terms of demonstrated increase in survival of treated patients, has been established with any degree of certainty only for a select group of breast cancer patients.

Premenopausal patients with histologic evidence of lymph nodal metastases who have undergone local therapy by mastectomy have experienced an increase in disease-free and overall survival after adjuvant chemotherapy with established combination regimens. Adjuvant chemotherapy now appears indicated for this defined subset of breast cancer patients.

Since the optimal adjuvant therapy for the premenopausal patient with lymph nodal metastases has not yet been developed, continued clinical investigations are indicated. If entry into a well-planned clinical trial is not feasible or acceptable to patients in this specific group, adjuvant combination therapy is indicated. Regimens which have proven efficacious in recognized clinical trials should be selected. It is the responsibility of the treating physician to evaluate the results of these trials for efficacy and toxicity.

Adjuvant combination chemotherapy, with agents shown to be active in the treatment of advanced breast cancer, has been shown to be more effective than chemotherapy with a single agent. Current information suggests that these drugs should be given at full dosage and for prescribed durations, since lesser amounts of chemotherapy or changes in schedule have shown inferior results.

In combination with adjuvant chemotherapy of stage II disease, adjuvant radiotherapy has not provided significant increases in survival, although it has reduced chest wall and regional lymph node recurrence in some studies.

Do the benefits of adjuvant chemotherapy clearly outweigh the risks?

Various forms of early toxicity have been documented in regimens that have proven to be therapeutically effective. Late effects of the various drug programs have not been identified fully. The survival benefits in premenopausal patients with histologic evidence of lymph node metastases (stage II) appear to outweigh the disadvantages of early toxicity.

Psychological and socioeconomic problems resulting from adjuvant chemotherapy have been identified as risks, in addition to the direct toxic effects of drugs, but they have not been quantitatively defined. In the meantime, education, counseling and emotional support of the patient by the cancer treatment team are of utmost importance. Increased financial burden to the patient, interruptions in family life and occupation, and changes in image may accompany the use of chemotherapy. This panel believes that these problems should be investigated prospectively and addressed directly in future conferences.

Should future adjuvant studies include hormonal manipulations?

Studies of hormonal manipulation as adjuvant therapy for breast cancer have shown suggestive benefits, but are not definitive when judged in terms of survival. Current studies on ER status are yielding more reliable data on the value of hormonal manipulation in the adjuvant setting. The problems that exist in the assessment of these current data include determination of the relative roles of hormonal and chemotherapeutic treatments, significance of the hormonal effects of the chemotherapeutic agents, and reliability of the receptor assays in individual patients.

For now, it appears that no hormonal manipulation has been established with enough confidence to make hormonal alterations—either alone or with chemotherapy—a standard form of adjuvant therapy. Recent data regarding potential benefits for hormonal treatment in patients demonstrating significant ER activity are encouraging.

ER activity should be quantified routinely in all patients with breast cancer. In all adjuvant trials, particularly those involving the use of hormonal treatment, ER activity is an essential factor for the classification of patients in planning the design of the clinical trial.

What is the role of adjuvant chemotherapy in stage I patients?

Patients with histopathologically negative axillary lymph nodes have a good prognosis after appropriate local therapy. The five-year disease-free survival without adjuvant chemotherapy can be expected to be at least 80%. The use of adjuvant chemotherapy in stage I patients exposes all to risks of toxicity without possible benefit to the majority. Some relevant studies are under way, but no conclusive data from clinical research exist to support the routine use of adjuvant chemotherapy

in this situation. Clinical research is now in progress to determine whether it is possible to identify a subset of patients with negative axillary nodes who are at high risk of relapse after primary therapy.

What is the role of adjuvant chemotherapy in postmenopausal patients?

Recent analyses of some ongoing adjuvant chemotherapy studies seem to show early benefit in disease-free survival in one or more subsets of postmenopausal patients with positive axillary nodes. The preliminary nature of this information precludes a definitive statement as to the role of such treatment. Clinical investigations should continue to explore the role of adjuvant chemotherapy in postmenopausal women with positive axillary nodes. Broad acceptance of the results of such trials would require concurrent controls, receiving only surgical treatment. Postmenopausal women with ER-positive tumors may benefit from the adjuvant administration of relatively nontoxic hormonal treatment in combination with cytotoxic drugs. It appears logical that hormonal therapy and chemotherapy should continue to be explored in ER-positive postmenopausal women, but only within the setting of well-controlled clinical trials.

Current information indicates that it might be necessary to give multiple drug regimens at full dose to achieve clinical benefit. Retrospective evaluation of patients in one large trial now seems to show survival benefit for those postmenopausal patients who ultimately receive the maximum prescribed dosage in contrast to those who received lower dosage.

Adjuvant chemotherapy of breast cancer is a rapidly changing and progressing field. New concepts have emerged from large, complex clinical trials. But women with breast cancer and physicians need to understand that definitive answers do not exist for the best management of all aspects of this complex disease. The optimal approach to decision-making and treatment is multidisciplinary, within the framework of knowledge provided by current research. Because these drugs are toxic, administration of chemotherapy should be undertaken only by or under the supervision of a physician experienced in their use. Optimal care requires frank and open communication between the physician and patient about the options available and the variables which make up the patient's potential prognosis, both for the risk of relapse and for response to therapy.

Survival Techniques in Diabetes Mellitus

Ms. Katie Ayers (nurse practitioner): This 19-year-old woman was admitted to St. Thomas Hospital because of uncontrolled diabetes, weakness, and nausea. Her plasma glucose on admission was 1,053 mg/dl. She had been admitted to another hospital a week previously with a plasma glucose of 800 mg/dl and mild diabetic ketoacidosis which resolved promptly. She was discharged but the same problem recurred within a week. The patient stated that she has had at least 12 such admissions over the past year for similar episodes. She has had diabetes since the age of 2 (17 years). She had never been well educated about diabetes and did not know how to take supplemental insulin when she had uncontrolled glucosuria. In the past, she had been told that when her urine ran 4+ for two days, she should get in touch with her physician. She had never been allowed to change her insulin dosage or take insulin supplements at home and had been afraid to have negative urine tests because of the fear of hypoglycemia. She had dropped out of high school. A pregnancy three years ago ended in a spontaneous abortion and she had a tubal ligation.

Physical examination on admission revealed a weak, thin, undernourished woman in no acute distress. She was afebrile, and vital signs were normal. She was mildly dehydrated. There was no retinopathy. The deep tendon reflexes were all absent. The rest of the examination was normal.

The plasma glucose returned to near-normal levels within several hours after supplemental injection of 10 units of regular insulin and administration of 2 liters of intravenous saline. During the last few days of hospitalization, the average

plasma glucose was about 150 mg/dl. At discharge, the insulin dose was 22 units lente, 8 units regular in the morning, and 14 units lente, 4 units regular before supper. She was instructed to take 6 units supplemental regular insulin whenever her urine glucose was 5%, and to repeat this every four hours until improvement was noted. She appeared to understand the principles of diabetes management, despite her limited education.

Mrs. Barbara Adair (nursing coordinator — Vanderbilt Diabetes Research and Training Center): At the onset of diabetes, there is much information that patients must learn, and many educators try to give them all that information. This is too much for some patients to assimilate. The types of information which need to be transmitted are cognitive, pragmatic, preventive, and survival. Only the survival factors must be known immediately for the patients to be discharged and to stay out of the hospital. The other information can be presented gradually as the patient is able to assimilate it. The two most important factors for a patient to know for immediate survival are how to give insulin, and when and how to call on health professionals for help.

The patient needs to know that he must take a daily insulin injection and continue to take it, even if he is sick. He should be observed in giving this injection. We know of one patient with uncontrolled diabetes who had multiple hospital admissions over an entire year. It was finally noticed that his insulin injection technique was so poor that most of the insulin dosage dribbled onto his skin and did not go subcutaneously. Another patient with a similar clinical history was observed to be injecting mostly air because she couldn't see well enough to load her syringe correctly. She insisted on being independent despite her failing vision. Neither of these patients even realized that they were not getting their prescribed insulin. Therefore, the

The Diabetes Clinical Care Conference at St. Thomas Hospital, Nashville, Tenn., a collaborative educational program of the St. Thomas Department of Hospital Education and the Vanderbilt Diabetes Research and Training Center, is coordinated by Joy Woodard, R.N. and edited by Alan L. Graber, M.D.

insulin injection technique is one of the first points to investigate in a patient with repeated lack of control of his diabetes. The second important factor to learn for survival is what to do on days of illness, how and when to contact the doctor, even during nonoffice hours, and when to go to the emergency room.

Ruth Miller, M.D. (Endocrinology Fellow — St. Thomas Hospital): What adjustments should the patient make for illness?

Mrs. Adair: The patient should have written sick-day rules, since verbal instructions are often forgotten. These should be posted at home on the door of the medicine cabinet so that they will not be lost when the patient becomes ill. The sick-day instructions of most importance are as follows: (1) The patient should check for ketones if glucosuria is 3% or higher (4+ if he uses the plus method rather than the percent), or if he is ill. When he is ill, he should check four times daily and routinely check for ketones even if he checked less frequently and did not check for ketones on well days. The test for ketones is best made with nitroprusside tables (Acetest) since they survive longer at home than the Ketostix strips. (2) Regular insulin should be available at home for emergencies, even if the patient routinely uses only intermediate-acting insulin. (3) Soon after the initial diet instruction, a dietitian should give a list of foods to use on sick days if the patient has nausea or vomiting. This will be similar to a "clear liquid diet." Fruit juice, soft drinks such as cola or ginger ale, broths, soups, and popsicles can usually be tolerated. (4) When ill, the patient should continue to drink fluids at least 8 oz/hr. If he is unable to keep fluids down, it is likely that emergency room treatment or hospital admission will be required. (5) The patient should take the usual full dose of insulin, even if vomiting. Hypoglycemia rarely occurs in the situation of intercurrent illness with fever and vomiting. (6) The patient should call his physician for more instructions, hopefully reporting the results of a recent urine test. With more widespread use of home plasma glucose monitoring, our sick-day instructions in the future will probably include instructions on supplemental insulin depending on the plasma glucose level.

Mrs. Bobbie Davis (dietitian — St. Thomas Hospital): Cola drinks are often better tolerated than some types of fruit juice, such as grape juice and pineapple juice. Some patients do better with caffeine-free soft drinks, such as Sprite or ginger ale. Of course, they should remember not to use

sugar-free colas, since the calories are needed in this situation.

Brent Gooch, M.D. (Research Fellow — Vanderbilt Diabetes Research and Training Center): Apple juice is usually very well tolerated.

Mrs. Adair: Some people just don't like apple juice. The type of fluid used depends on the patient's individual preferences and what he feels he can tolerate when he is ill. Popsicles are usually well tolerated and patients can be taught to make their own popsicles using whatever fruit juice or soft drink they prefer. It is important to remember that, in patients, similar to this one, who have repeated admissions for such a problem, their understanding of diabetes management should be reassessed each time. Just because they have had diabetes for several years does not necessarily mean they understand what to do on sick days or have the proper technical skills. Williams¹ showed several years ago that long-term diabetes was associated with loss of technical skills such as accuracy in insulin injection technique.

Dr. Miller: How can the patient decide how severe the illness is, and when to contact the physician?

Mrs. Adair: If he is vomiting or has fever, he should contact his physician earlier; this is especially important with children, who can become dehydrated and develop ketoacidosis very quickly.

Alan L. Graber, M.D. (endocrinologist): We instruct patients that when they are ill or have 5% glucosuria with ketonuria they should take a supplemental dose of regular insulin, approximately 20% of the total usual daily dose. They should recheck the urine in four hours and, if it is still strongly positive for both glucose and ketones, repeat this dose. If after two supplemental doses there has been no improvement, they should call the doctor, come to the office if during office hours, or come to the emergency room. In situations where there is moderate dehydration but hospital admission is not absolutely necessary, injection of an antiemetic and 1,000 cc of intravenous fluids over three to four hours is tried. If the patient is then feeling well enough to keep fluids down and follow out the rest of the sick-day routine at home, hospitalization can sometimes be avoided.

Mrs. Ann Turner (nurse practitioner — Vanderbilt Diabetes Research and Training

(Continued on page 196)

W. BARTON CAMPBELL, M.D.

A 37-year-old woman was admitted to St. Thomas Hospital following a syncopal episode. Four years earlier she had a saphenous vein graft to the anterior descending coronary artery. Three days prior to admission she had nonspecific myalgia, and the day before admission she had atrial fibrillation. She was started on quinidine 200 mg orally, four times daily, but the evening of admission she had a syncopal episode and an ambulance was called. She recovered consciousness, and when placed in the ambulance was in sinus rhythm, but during the ambulance trip she had a recurrent syncopal episode and was noted to be in "ventricular tachycardia." No recordings of this event were obtained and sinus rhythm returned spontaneously.

At the time of admission her potassium was 3.7 mEq/liter. Electrocardiogram showed right bundle branch block with anterior hemiblock, and a PR interval of 0.28 seconds. Q waves were present in V_1 and V_2 . The rate was 75/min and the QT interval was 0.56 seconds. She had recurrent brief runs of tachycardia in the hospital and quinidine was increased to 400 mg orally, every six hours. Quinidine blood level was $3.1 \mu\text{g/ml}$ (therapeutic range 2.3 to $5.0 \mu\text{g/ml}$). The rhythm strip (Fig. 1) was obtained during an episode of tachycardia.

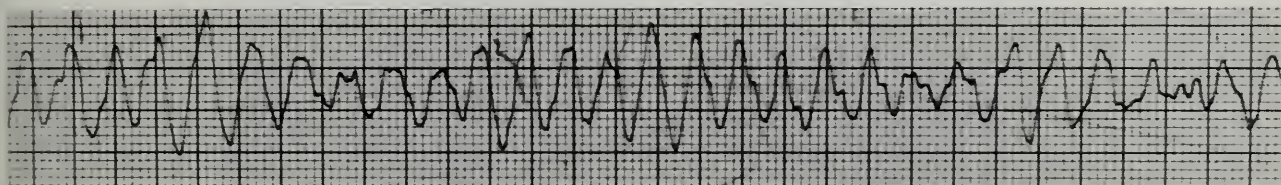


Figure 1

Discussion

The rhythm strip discloses a slightly irregular tachycardia with a rate of approximately 250/min to 280/min. The QRS complexes are wide and no P waves are discernible. The QRS complexes inscribe a somewhat sinusoidal pattern with oscillating increase and decrease in the amplitude of the QRS complexes. This sinusoidal variation around the isoelectric line was described in the French literature in 1966 and given the name "torsades de pointes" (twistings of the points).¹

The ventricular rate with torsades de pointes is usually in the range of 200 to 250 beats per minute. The importance of recognition of this

type of ventricular tachycardia lies in the fact it is commonly associated with a prolonged QT interval. Accordingly the standard "type I" antiarrhythmic agents, such as procainamide, quinidine and disopyramide (Norpace), which cause further QT prolongation are contraindicated in these arrhythmias if QT prolongation indeed was present. It should be emphasized that many patients display the usual monomorphic pattern of ventricular tachycardia in conjunction with the intermittent sinusoidal variation of torsades de pointes. Although torsades de pointes resembles coarse ventricular fibrillation, these episodes usually terminate spontaneously. They may on occasion, however, progress to frank ventricular fibrillation and are associated with a high incidence of sudden death.

Patterns of this type have been described in all types of QT prolongation including congenital

From the Department of Cardiology, St. Thomas Hospital, Box 380, Nashville, TN 37202.

QT prolongation syndromes, hypokalemia, hypomagnesemia, ischemic heart disease, myocarditis, and in conjunction with medication such as the phenothiazines, tricyclic antidepressants and liquid protein diets. They have also been described in conjunction with high grade, atrioventricular heart block. Torsades de pointes seems to be the usual cause of quinidine syncope. Overdrive pacing may be successful in controlling this dysrhythmia.

It has been emphasized that torsades de pointes may be quite similar to undulatory patterns of ventricular fibrillation described by Wiggers.^{2,3} Occasional patients who have tachyarrhythmias that morphologically demonstrate torsades de pointes do not have prolonged QT intervals. These patients may be appropri-

ately treated with type I antiarrhythmic drugs. It is emphasized that the routine electrocardiogram should be examined before deciding to withhold antiarrhythmic drugs in these patients.⁴

Following discontinuation of quinidine no further episodes of tachycardia were observed in this patient.

FINAL DIAGNOSIS: Torsades de pointes. 

REFERENCES

1. Dessertenne F: La tachycardie ventriculaire a deux foyers opposes variables. *Arch Mal Coeur* 59:263-272, 1966.
2. Kossmann CE: Torsade de pointes: An addition to the nosography of ventricular tachycardia. *Am J Cardiol* 42:1054, 1978.
3. Wiggers CJ: The mechanism and nature of ventricular fibrillation. *Am Heart J* 20:299, 1940.
4. Smith WM, Gallagher JJ: Les torsades de pointes; an unusual ventricular arrhythmia. *Ann Intern Med* 93:578-584, 1980.

Diabetes Clinical Care Conferences . . .

(Continued from page 194)

Center): It is important to remember that the technique of performing urine testing is sometimes improper and the results can confuse the clinician. For example, a patient recently reported that all the urine tests were positive for ketones when tested with the Acetest tablet. When the patient was observed doing the test, it was noted that she always put the tablet on a piece of blue toilet paper, causing a reflected abnormality which the patient read as positive.

Mrs. Adair: In summary, survival techniques must be learned by each insulin-dependent diabetic before he is allowed to leave the hospital, particularly if he is a newly diagnosed diabetic. The remaining information for education of the

diabetic can be learned later. This includes preventive information, such as factors which promote a healthy life, weight control, foot care, oral and dental hygiene; pragmatic information, such as how to buy food, how to educate the rest of the family, what to do about employment, insurance, and pregnancy; and cognitive information, such as understanding what diabetes is, its relationship to heredity, and how insulin works in the body. This information should be learned eventually, but is not necessary for immediate survival outside the hospital. 

REFERENCES

1. Walkins JD, Williams TF, Martin DA, et al: A study of diabetic patients at home. *Am J Public Health* 57:452-459, 1967.

Radiology Case of the Month

RANDALL L. SCOTT, M.D. and MARTIN L. PINSTEIN, M.D.

A 28-year-old black man presented for a routine preemployment history and physical. There was no history of major trauma. A routine CBC was normal. What is your diagnosis?

- (1) Eosinophilic pneumonia
- (2) Alveolar sarcoidosis
- (3) Fat embolism
- (4) Acute silicosis



Figure 1. PA chest x-ray shows peripheral alveolar infiltrates bilaterally.

From the Department of Radiology, University of Tennessee Center for the Health Sciences, 865 Jefferson Ave., Memphis, TN 38163.

Radiographic Findings

The pertinent findings consist of a patchy, bilateral, parenchymal infiltrate located primarily in the peripheral portion of the lung. The central, perihilar areas are spared of disease. There is no evidence of pleural disease and no discernible adenopathy. Most importantly, the clinical information provided leaves little choice for a final diagnosis other than sarcoidosis.

Eosinophilic pneumonia, also known as idiopathic eosinophilic lung disease or Loeffler's syndrome, is characterized by transient, patchy, nonsegmental areas of consolidation associated with blood eosinophilia. The diagnosis should be suspected when an atopic individual presents with blood eosinophilia and "fleeting" peripheral lung infiltrates.¹ The acute form may cause only minimal symptoms, whereas the more chronic phase is more likely to be associated with high fever and dyspnea requiring systemic therapy with corticosteroids.² The normal CBC in this patient makes eosinophilic pneumonia an unlikely diagnosis.

Fat emboli to the lungs are often the result of major trauma, usually involving a fracture of the lower extremity. The chest x-ray will often show peripheral alveolar infiltrates one to three days after the injury. The routine nature of this patient's examination without a history of antecedent trauma makes this diagnosis unlikely.

Acute silicosis may present with peripheral alveolar infiltrates in a patient with chronic dyspnea and cough, but it requires exposure to silica dust. No such exposure was indicated in the information provided about this patient. Adenopathy, with or without calcifications, may occur. Progressive disability with associated chronic interstitial lung changes may occur long after removal of the patient from the silica dust environment.³

Discussion

Sarcoidosis is an idiopathic disease affecting many visceral organs, most notably the lungs. The diagnosis is usually one of exclusion, confirmed by nodal or parenchymal biopsy revealing noncaseating granulomas. Most cases are initially identified in asymptomatic or mildly

symptomatic individuals who are being evaluated for some other reason. The disease has an affinity for black women in the 20 to 40 age group. It is most rare in the Chinese population.⁴

Radiographic findings in the chest may be divided into three groups: (1) hilar adenopathy with no visible pulmonary abnormality, (2) pulmonary disease with or without hilar adenopathy, and (3) pulmonary parenchymal fibrosis. Group 2 is the most common.

Hilar adenopathy, when present, is usually bilateral and symmetrical and associated with right paratracheal adenopathy. This has been referred to as the "1-2-3" sign and is commonly seen. Occasionally there is a sharp demarcation of the medial edge of the lobular hilar nodes from the mediastinum. This appearance has given rise to the term "potato nodes." Asymmetric nodal involvement, as well as mediastinal and left paratracheal adenopathy, may also be seen.

If alveolar disease is going to develop, it often follows the adenopathy. As the nodes regress they become indistinct and parenchymal perihilar disease becomes more apparent. This gradual transition has been referred to as the "hilar haze," and, when seen, is quite characteristic of sarcoidosis. Pleural effusion, although uncommonly associated with the disease, may occur in 10% of cases. Cavitation is rare.⁵

When parenchymal disease has been present for two years or more, complete resolution of parenchymal and nodal changes is uncommon, and progression to pulmonary fibrosis is likely to occur. Approximately 20% of patients with known sarcoidosis develop irreversible pulmonary changes with bleb or bulla formation, bronchiectasis, and general emphysema.³

DIAGNOSIS: (2) Alveolar sarcoidosis. 

REFERENCES

1. Frazer R, Pare J: *Diagnosis of Diseases of the Chest*, vol 2. Philadelphia, W.B. Saunders Co, 1978, p 902.
2. Hall J III, Kozak M, Spink W: Pulmonary infiltration and eosinophilic syndrome. *Am J Med* 36:135, 1964.
3. Frazer R, Pare J: *Diagnosis of Diseases of the Chest*, vol 3. Philadelphia, W.B. Saunders Co, 1978, pp 1499-1690.
4. Longscope W, Freiman D: A study of sarcoidosis. *Medicine* 31:1, 1952.
5. Rabinowitz J, Ulreich S, Soriano C: The usual unusual manifestations of sarcoidosis and the "hilar-haze" — a new diagnostic aid. *Am J Roentgenol* 120:821, 1974.

Physical Growth Assessment of Infants and Children: Training Aids

LEE FLESHOOD, Ph.D.

Introduction

In the early 1970s, there was review of simple procedures available in the Tennessee Department of Public Health (TDPH) Clinics to give useful indication of the nutritional status of children. Although height and weight measurements were deemed ideal, review of results from multiple clinics indicated that accuracy and standardization of the techniques were essential.

The purposes of this communication are to describe why it is important that the measurements of height and weight be given careful attention by clinic personnel, and to introduce training aids that have been developed and used by the Tennessee Department of Public Health.

How would you answer the following questions?

Did the formal training of your unit's clinic personnel include instruction in plotting and interpreting growth charts?

Are clinic personnel in your unit aware that the vast majority of children (in particular from birth to 10 years of age) who exhibit a normal pattern of growth will also be normal as to other health indicators?

Do your clinic personnel understand that relatively small errors in measuring, recording, or plotting an infant's height or weight can seriously compromise the time of anyone using these data for assessment?

Do clinic personnel in your unit realize that an error of one inch in the length measurements of a 6-month-old can change the infant's percentile ranking from the 5th to the 25th or vice versa? Or that rounding off 4.5 months to 5 months could

take a child from the 10th to below the 5th percentile?

Did you know that two people are needed to take recumbent length measurements? Or that height rods on beam balance scales should not be used, or for that matter, that they should be removed altogether? The flexibility of the headrest allows inaccuracy and the scale is an unsteady base for children to stand erect.

If you were to ask your clinic personnel for their interpretation, recommended intervention and/or follow-up, and suggested schedule for further measurements for a child at a given point on the growth charts, would you get standard answers?

It can be emphasized strongly that adequate physical assessment is predicated on adequate equipment for measuring recumbent length, standing height, and body weight. When adequate equipment is available, training clinic personnel in the proper techniques and interpretation can proceed smoothly. Recently, the Nutrition Division of the Center for Disease Control (CDC) recommended a number of effective length and height measuring devices. Information about the report "A Review of Selected Anthropometric and Hematologic Instruments Used in Nutrition Assessment" can be obtained from the Supplemental Food Programs Division, USDA-FNS, Washington, DC 20250.

Historical Perspective

Tennessee was one of the first five states to initiate a nutritional surveillance system in 1974. (For details, see "Surveillance of Nutritional Status in the United States," Gordon E. Robbins, *Public Health Currents*, March-April, 1980.) When data were retrieved from the clinics on a regular basis, it became apparent that significant problems existed with the equipment,

From the Tennessee Department of Public Health, Nashville.

Dr. Fleshood is director of the Division of Nutrition/WIC Services for the TDPH.

the techniques being used, or both. Most states participating in nutrition surveillance of public clinics find approximately 10% to 12% of the children below the 5th percentile for height for age, indicating possible growth stunting, and 10% to 12% above the 95th percentile for weight for height, indicating possible obesity. In contrast, some Tennessee clinics in 1974-1975 reported stunting and obesity exceeding 30% of the children screened.

Currently it can be assumed that in Tennessee either equipment, measuring techniques, or both are a problem if 14% or more of the children screened are indicated at risk for either of these problems.

Shortly after the National Center for Health Statistics-CDC growth charts became available in 1976, a TDPH policy was established requiring growth charts to be plotted for infants and children participating in WIC (a USDA-supported supplemental food program for women, infants and children) or the Early Periodic Screening Diagnosis and Treatment (EPSDT) programs. It then became apparent that the development of training materials should be a top priority. The process of summarizing available scientific data and gathering the best judgments of experts was begun. Our goal was to produce both a script for audiovisual presentation and written growth chart guidelines that could be used to teach students, new employees, or staff. It was our intent to design materials useful for all pediatric clinics and at a reasonable price.

Audiovisual Presentation

A 30-minute videotape and 35 mm slide/cassette tape show entitled "The Road to Life," with music and sound, was produced. The major areas addressed in this presentation include objectives of presentation; origin of the current growth charts; explanation of percentiles; the importance of accuracy; procedures for taking the infant's length, weight, and head circumference measurements; procedures for taking height and weight; measurements of children aged 24 months or more; rules for accuracy and quality control; choosing the appropriate growth chart;

how to plot the growth charts; and patterns of growth commonly seen. Orders for the audiovisual presentation are accompanied by a six page pamphlet, "Growth Chart Guidelines."

Growth Chart Guidelines

The purpose of the guidelines developed is to facilitate the maximum use of the growth chart as one of the assessment tools available to health professionals. Included in the pamphlet are three tables, one each for "Weight for Height," "Height for Age," and "Weight for Age" growth grids. The major feature of the tables is an arrangement of columns giving *Interpretation*, *Recommended Intervention and/or Follow-Up*, and *Time of Next Measurement* for the percentiles most commonly requiring judgment by the health professional.

Alternatives for Use of the Training Materials

The minimum time required for a training session is approximately 50 to 60 minutes, which includes a 30-minute audiovisual presentation, an introduction of guidelines, a quick demonstration of technique, and a few questions. A full day can be devoted to the topics covered, especially if the group is given the opportunity actually to take measurements.

After conducting over 20 of these sessions with nurses, nutritionists, LPNs, and nurse aides, in groups that have ranged in size from 15 to 80, we have found that a 3½ hour block of time works very well.

The audiovisual presentation is available, and requests for previewing should be accompanied by a \$10 charge for handling. If the presentation is purchased, the \$10 will be deducted from the purchase price. Duplication rights are available to all purchasers at a flat rate of \$40 per copy. One copy of the "Growth Chart Guidelines" is included with each order. Multiple copies are available. Persons interested in previewing or purchasing materials should contact University of Tennessee, Center for Government Training, Attn: Tommy Himes or Gale Fentress, Box 24180, Nashville, TN 37202. 

The Environmental Level/Community Skills Profile System

PAT NICHOLS

Since the beginning of its deinstitutionalization efforts in the early 1970s, the Division of Mental Retardation of the Department of Mental Health and Mental Retardation has had as its major goal the provision of the most appropriate community environment for each client it serves. The division has been influenced by Wolf Wolfensberger's normalization philosophy as well as by court decisions which mandate that services be provided in the least restricted alternative consistent with individual needs. Along with these factors, the division, because of its accountability to both its clients and the citizenry of Tennessee, had to guarantee that mentally retarded persons served by state-funded agencies would receive care in an appropriate amount and of high quality.

Out of this approach to service came the development of the Environmental Level/Community Skills Profile System. Every mentally retarded individual differs in what he needs for survival in a community environment. Based upon input from mental retardation professionals, both those experienced in institutional care and those working in community-based agencies, the division developed five levels of care, i.e., environmental levels, on which to base its community residential service delivery system.

These five levels are as follows:

(1) Level I—institutional care in a 24-hour care facility meeting all ICF/MR regulations. The three large state-operated facilities, Greene Valley, Clover Bottom, and Arlington Developmental Centers, are examples of Level I facilities.

From the Tennessee Department of Mental Health and Mental Retardation, Nashville.

Ms. Nichols is a community resource developer in the Division of Mental Retardation.

(2) Level II—a community-based group home with near continuous staff-resident interaction, both in and out of the home. During times of peak activity when residents are present, the staff-resident ratio is 1 to 4. Clients living in this environment usually have acquired basic self-help skills and are capable of self-preservation. However, they need much supervision and lack many of the so-called community survival skills, i.e., crossing streets, communicating with others, and preparing meals.

(3) Level III—a group home in which clients often leave the home unaccompanied by staff. During time of peak activity, the staff-resident ratio is 1 to 8. Clients living in this environment are able to function on a limited basis by themselves. They have refined most if not all of their self-help skills and have no major behavior problems.

(4) Level IV—a sheltered apartment program with shadow supervision. Residents are assisted by a counselor-advocate who lives no more than 10 minutes away from the apartment. This person assists the client with such things as obtaining transportation for special events, making appointments, consulting with professionals regarding client problems, and aiding in the development of specialized skills such as homemaking, money management, or socialization skills. If needed, the counselor-advocate provides direct counseling services to the client.

(5) Level V—a semi-independent living arrangement where clients live in self-contained units such as apartments or duplexes, either shared with other mentally retarded persons or alone. Social services provided are usually only "spot check" contacts; this may vary from once or twice per week to only once every 60 days.

These program categories do not account for all of the differences in program design or ser-

vice delivery concepts throughout Tennessee. However, they are representative of the majority of community residential programs.

The Community Skills Profile (CSP) is an evaluation instrument developed by the division and utilized statewide as a placement tool to determine which of the above five levels of care is most appropriate for a particular mentally retarded adult, based upon his skill attainment and adaptive behavior. This profile was developed utilizing input from a cross section of mental retardation professionals and paraprofessionals, both state employees and community mental retardation program staff. Given previously determined staffing ratios and other supportive staff requirements for each of the environmental levels, these persons selected skills which they felt were necessary for a person living in the particular environment. Likewise, they selected maladaptive behaviors which would not be permissible for clients in each level.

The CSP, when administered to a mentally retarded adult, provides a profile score for that person, but it is only one facet in the determination of the environment appropriate for the individual. This score, together with other pertinent data about the client such as records, family input, and professional opinion, provides an interdisciplinary team with information which it uses to determine the CSP level. There are five CSP levels corresponding to the five environmental levels, i.e., a person who is CSP Level II would be able to live most appropriately in an Environmental Level II group home.

The CSP has not been designed to replace other standardized instruments which measure intelligence or adaptive behavior. It provides practical information which will reinforce the findings of these other instruments. It aids per-

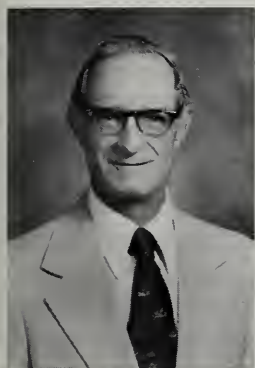
sons working with a mentally retarded adult to make a more reliable evaluation, and thus appropriate recommendations with regard to the particular level of care and training that an individual requires. It accomplishes this by zeroing in on a comparison between individual unique qualities and the demands the several types of environments make upon their occupants.

The CSP is also useful in determining particular skills that an individual needs to move to a less restricted or structured environment. It can also provide a framework for developing program objectives which are meaningful for the client as well as for the people who live and work with him.

The Division of Mental Retardation has often encountered in its negotiations with other state and federal agencies on behalf of the mentally retarded the tendency to lump all mentally retarded individuals into one category. Because the CSP points out differences in individuals, it reinforces the theory that all mentally retarded people *cannot* be classified similarly. The Environmental Level/Community Skills Profile System offers some common denominators to which those outside the field are able to relate. Through implementation of this system, the division and the state Fire Marshal's office negotiated the use of fire and safety standards in community residential programs which consider the varying capabilities of the clients in each level.

This system was not designed to create rigid categories for the retarded, but by recognizing distinct differences in persons with mental retardation, it aids in planning and providing services which will meet those individuals' needs in order that they may survive in a community environment.

TENNESSEE MEDICAL ASSOCIATION
146th ANNUAL MEETING
April 8-11, 1981
Hyatt Regency Hotel, Knoxville, Tennessee



GEORGE A. ZIRKLE, JR.

**President's
page**

Reflections on Ethics and Behavior

Our medical society's founders prescribed purposes which direct us to dedicate ourselves as a profession to excellence and application of current knowledge. We need to dedicate ourselves to ethical and moral behavior with patients and colleagues, to dedicate ourselves to professionalism, integrity, and humanitarianism, and to have compassion for our patients in their afflictions.

We need to rededicate ourselves to the principles of medical ethics.

Recent calls from physicians and the allied professions have revealed glaring defects in our conduct with our colleagues and our patients.

Some examples, without names or locations, reveal a gynecologist criticizing another gynecologist in front of the patient for a Pap smear which was read as normal a year previously. He was heard to remark that the Pap smear, in all probability, was not normal a year ago (i.e., indicating the first GYN specialist had made a mistake).

A casual remark on a chart by another physician led to a lawsuit over lack of proper treatment before and after delivery by another obstetrician.

A physician at a university hospital recently referred a puzzling case of paralysis to a neurologist. After seeing the case, the neurologist called in a neurosurgeon without calling or consulting the primary physician first. The primary physician in this case would have preferred a different neurosurgeon, but did not wish to make an issue of it at that late date.

These are a few—and there are many more—of the ethical complaints we hear from patients and our colleagues.

Our right to use the title M.D. and write prescriptions is one that is often abused. Physicians who sell narcotic prescriptions to drug users should be removed from our society. Our pharmacy friends and our responsible patients are kind enough to let us know about these abuses, which are more widespread than any of us realizes. With the increase in drug traffic, etc., patients and assistants are removing prescription pads from physician offices and selling them. Our pharmacists report more and more forged prescriptions. We need to have a close liaison in each community with the local pharmaceutical society, thereby enabling us to keep better informed as far as physician and physician assistant abuses.

We need to remember and recall all of the prominent features of the Oath of Hippocrates in our everyday practice.

Sincerely,

George A. Zirkle, Jr. M.D.

PRESIDENT

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MARCH, 1981

editorials

On Hooks and Slices

We must, indeed, all hang together,
Or most assuredly we shall all hang separately
— Benjamin Franklin

When I started there as a high school freshman, the Baylor School in Chattanooga had a nine-hole golf course, and my father, who was not a golfer himself, bought me four golf clubs, a bag, and four golf balls. The course had an underbrush-filled gulley on either side of the first fairway, maybe fifty feet or so from the tee. I hit

four balls, and each made its unerring way into that gulley and disappeared forever into the underbrush. The process took most of the afternoon. The next time my golf clubs saw daylight was when my son found them as he was rummaging around in a closet at his grandmother's house. It was not so much that I was discouraged. It was just that I decided I had better things to do with my time than look for golf balls in the underbrush.

My contacts with golf since then have been cursory. I sometimes followed a couple of my good friends around the golf course when they were on the golf team at Vanderbilt, and I occasionally watch bits of a tournament either live or on TV. I can carry on a not too dim-witted conversation about the shining lights of the circuit, and I would even recognize some of them provided I saw them in the context of golf. But as you probably have gathered, golf is not "my thing," and so it was news to me when, for want of anything else to read, I happened to pick up a *Golf Digest* and read in it an editorial about a running feud going on between the club pros and the pros "on the circuit." I thought they were all the same.

The gist of the editorial was that the popularity of golf, after having seen a sustained rise for 30 years (I'd say it is nearer 50), has peaked, and is being challenged by other recreation forms, especially tennis, and that the situation is not being helped by this feud. The message was for the pros to get their act together and start interesting some of the young in golf, or one day golf pros would be museum pieces.

I was interested in the editorial not particularly as a piece about golf, but rather as a demonstration of the fractiousness of human beings, and because I could see a lot of parallels between the golfing situation and medicine, where all sorts of in-fighting is presently either raging or fermenting. It used to be a matter of town and gown, or maybe physicians versus surgeons or the GPs versus the specialists, but that became too simple, and everybody is now choosing up sides to pick on each other, or collectively on the AMA. There is the fight between the plastic surgeons, oral and maxillofacial surgeons (including dentists), and otolaryngologists (who used to be "ENT men") as to who cuts up the head and neck. It is bad enough to squabble with the podiatrists and chiropractors over who jiggles the bones, but our colleagues quarrel over whether orthopedic or neurosurgeons should operate on

discs—or whether chymopapain is better than either one. And who should do bronchoscopies, gastroscopies, and colonoscopies?

When I was coming along, medicine, popularized by the novels of Lloyd C. Douglas, M.D., became *the* thing to do, and during that time and in the days after World War II, when medical science showed unprecedented expansion, it attracted the best minds from among our young. After the Russians lofted *Sputnik* into space, the challenge shifted in the '60s to the natural sciences. Then in the '70s the Vietnam War brought disillusionment with science—a feeling that science had failed us and would not lead us into the brave new world—and the climate became one of not only anti-science, but even anti-intellectualism, and one now sees articles proclaiming that our people are becoming scientifically illiterate.

Through all of this, medicine has not fared too badly, although there is a disturbing trend among our younger colleagues to treat medicine as just another job, and along with the auto workers and truck drivers to start haggling about hours and wages. In this atmosphere it is not surprising to see doctors' labor unions begin to flourish. I have complained a little on past occasions that every job has been elevated in the public eye to the status of a profession, where historically the professions have been medicine, the law, and theology. I am not sure, though, that the professions have not degraded themselves instead of the other way around. If medicine goes to labor unions, professionalism—true professionalism—in medicine will be dead.

Well, doctors—colleagues,—like the golfing editorialist my message is that we need to get our act together, or one day we will likely not have an act. The government—which ultimately reflects the wishes of the people—would love to take it over. We may experience surcease from federal regulation now that the administration has changed, or it may be only a respite; we shouldn't count on either one. We need to take time to shore up our defenses, and we can do that only if we are unified. Because Sweden had a strong medical association, in the midst of socialism Swedish doctors have fared well and the caliber of Swedish medicine has remained high. From Britain, however, where Medicine has been fragmented, for years there has been a brain drain contributed to by doctors who found the overregulated practice of medicine there stultifying and without adequate compensation in terms

of either satisfaction or money. One (and probably hoards of others, as well) British physician was grieving aloud that his income was so low that he could not give his children the advantages he had had.

If the various specialty groups are going to continue fighting among themselves and against organized medicine at all levels, with the medical schools taking pot shots at them all, and vice versa, on the sidelines, we can look at Britain and see our future a few years hence.

A word from St. Paul might be appropriate at this juncture. "He that thinketh he stand, let him take heed lest he fall."

J.B.T.

The Reelection of Judge Colt

Sometimes it seems we get so caught up in the big general problems like the federal bureaucracy, the hostage situation, inflation, and so on, that we assign lesser status to things which, if we thought about them, would receive first priority. There is a sleeper coming up on society's blind side, and unless something is done about it, and soon, we are going to have a real war on our hands. All we need to do to see the problem is to connect a few isolated news stories together, and we have a vivid, if ugly, picture.

Item: A downtown Nashville jewelry store owner is gunned down by armed robbers at ten o'clock one morning. Other shopkeepers admit they have all had fears about such occurrences for a long time, and discussed what they would do in case of a robbery. Most of them carry guns. The victim did not. Posted on the wall of his store was a placard: "Thou Shalt Not Kill."

Item: An average of 17 burglaries are reported each day from a prosperous Nashville suburb.

Item: The criminal court system in Nashville (and I suspect elsewhere) is falling hopelessly behind in handling general criminal cases because of its statutory mandate to handle "Class X" cases within 120 days. In the meantime unconvicted but indicted criminals are at large on bond. Some of those have several successive charges against them, as they commit more crimes—often violent ones—while awaiting trial.

Item: The Ku Klux Klan is an armed camp. It is soliciting school children with pamphlets asking such questions as, "Are you uptight about

schools — or just about Negroes?" The Klan is a minority, but a militant one — and growing.

Item: A man in Fort Worth has offered a \$50,000 reward to anyone who will report to *him* the identity and whereabouts of two men who stole his wife's jewelry. He intends, he says, to kill them and take his chances with the courts.

Item: In forced budgetary cutbacks, Nashville and Memphis administrations have reduced those cities' police force; the Tennessee Crime Lab has become ineffective because its three scientists have left for better paying jobs. Poor security at the lab led to its being burglarized.

The list could go on and on. Each of you could make your own.

I was having a brief pre-drill conversation in the waiting room of my dentist's office the other day with a well-dressed, articulate man I didn't know. The subject of the 17 daily burglaries was the hot item in the news that morning, and the conversation finally got around to it. "I guess," he said, "we will all have to go back to wearing pistols." The police in Fort Worth responded to the robbery victim's intent with the statement that "we used to have vigilantes, but now we have laws. If he carries out his threat, he will have to be dealt with." Confrontation.

The numbers of the aggrieved who feel they have no recourse in the law are growing as they see their assailants unprosecuted, unsentenced, and free on bond even while they themselves languish in hospitals or weep over their dead. Increasing numbers, who are beginning to feel strength in those numbers, are becoming willing to take the law into their own hands. As the law has shown itself unable to cope with existing crime, it is unlikely to be able to handle the vigilantes — unless it concentrates on them and forgets about the real criminals. Some who have watched our legal and judicial systems over the past few years would not be surprised to see that happen, as the citizenry is coming to feel those systems function to protect the criminal and further penalize the aggrieved.

Violent crime unpunished breeds violent answers, as failure of law to provide protection can make scofflaws of us all. The admonition that those who live by the sword perish by the sword has little meaning when so many who eschew the sword also perish by it. No rational person wishes to see the citizenry take the law into its own hands, as that leads to anarchy. But the citizenry demands protection from criminals, and what the citizenry demands, one way or another

the citizenry will ultimately have — and on its own terms. We are a young nation, and frontier days are only a generation or so away — and kept constantly before us on the tube. The veneer of civilization is thin.

Reading the signs of the times, the terms of the citizenry are pointing toward revival of the law of the frontier: Judge Colt.

J.B.T.

Only a Little Planet

There is but one ocean, although its coves have many names.

The single sea of atmosphere has no coves at all.

The miracle of soil, alive and giving life, lies thin on the only earth, for which there is no spare.

John Hay — *In Defense of Nature*

In August, 1945 I was stationed at Camp Lee, Virginia, an expendable medical officer, MOS 3100, profiling returnees from the ETO for redeployment to the Pacific for the big push which would close out the War. Then it came. A blast like nothing in the memory of mankind shot fire and brimstone high into and above the atmosphere. Radioactive fallout was carried by the winds we knew not where, for we were inexperienced in those days. But that was a minor explosion, a mere dewdrop in the ocean of nuclear contamination we can now dump into every nook and cranny of our small planet and its envelope — maybe even into outer space. We are no longer inexperienced — no longer amateurs — in this business of contamination, you see.

That ended the War. No one wanted instant incineration or worse — not in those days. As we have become more sophisticated, though, every nation is beginning to think that though all else perish, it can and will survive.

It began with our seashores a half century or more ago. We destroyed their protective dunes, and the marshes dried up. We built breakwaters, and the eddies they produced ultimately destroyed the beaches. Then it was our rivers. Remember when the Cuyahoga River caught fire in Cleveland? It burned for days as a massive catharsis for its pollution.

There would always be water enough, we said. It is an endless commodity, right? But our lakes and streams became lifeless from chemical wastes and thermal pollution from our plants. In any case, nuclear and chemical wastes could never make a mark on the endless oceans, could

they? But they did. A few years back a fantasy movie, *Soylent Green*, painted a picture of the future when mankind's only food supply came from the ocean. When the ocean died, man's only food was himself. The green briquets which had once been seaweed became autogenous. Gross? You bet. Far fetched? News items indicate we are on our way.

Well, thank God there is at least an unlimited supply of air, right? Wrong again. One day we suddenly found the fluorocarbons with which we propelled our aerosols and cooled our refrigerators were rising to the ionosphere and destroying the ozone, the filter that mitigates the sun's damaging ultraviolet radiation. Among other ill effects skin cancers, including melanomas, fired by UV, are on the rise as the ozone is depleted. Today the ozone, tomorrow—?

There are no limitless resources. Although some are renewable within limits, we can exhaust them all. But when all else is said, say it loud and clear, with deference to Buck Rogers and Luke Skywalker, that we have only one planet. Our space probes have so far proved all the others to be unfriendly.

Take pains to protect spaceship Earth. All man's ingenuity aside, as far as we know there is no spare!

J.B.T.

Ave Atque Vale

After 14 long months of waiting, watching, and negotiating, with many false starts, roadblocks, and disappointments, our 52 former captive Americans are free and home on American soil. Their kidnappers gained little, and America lost little. The losers were the captives, their families, and the eight brave volunteers—the heroes—who gave their lives in a fruitless attempt to free the 52.

It is proper that America—and the world—rejoice. Thursday, January 29, has been declared a national day of thanksgiving, and that is proper, too. But now that we have gotten our freed prisoners back, it is time to settle down and view the situation in perspective.

A hero is one who risks his life without thought for his own safety, *and above and beyond the call of duty*. On my return voyage from Europe on the SS *Marine Jumper* (an aptly named Liberty ship) after World War II, two of

the 13 other officers who shared a stateroom with me had fought together across North Africa as commanders of tank companies. One of them had won two Silver Stars, and the comment of the other was that he had to be crazy. He himself had, he said, simply done his duty and was scared to death all the time. Each of them had two Purple Hearts. In war, acts of heroism are so commonplace they often become confused with simple duty. In peacetime, on the other hand, heroes are not that easy to find, and the converse applies, as simple duty becomes confused with heroism.

Every war, even undeclared ones, has produced its prisoners of war, most of them taken captive in the process of just doing their duty. Many of our aviators shot down over Vietnam while doing their duty were held captive for seven years, much of it long after the war had ended. Their release incited an emotional catharsis much like that we have just witnessed; it was something to occupy the public mind, already reduced to rubble by the frantically scrambling news media. Those POWs, though, had been fighting a war.

On a morning in November, 1979, a group of terrorists euphemistically referred to as students (what they were students of was terrorism) surprised and imprisoned the United States diplomatic contingency in its own embassy in Tehran, Iran. At the time of their capture, the diplomats, secretaries, military personnel, and so on were going about their daily peaceable duties. They were under the protection of internationally recognized diplomatic immunity. It did them no more good than if they had been fighting a war. They have therefore been referred to on occasion as prisoners of war. It is a tribute to their spirit that they held up well during their captivity. But they were victims, prisoners and not hostages, and *not* heroes, as the former captives themselves have been careful to point out. Like war, foreign service of any sort carries inherent risks which are well known to those who undertake it as a career. That should have been recognized also by the administration before it made the extravagant statement that we would do *anything* to get our hostages back.

Our military and veterans hospitals are even today still filled with severely wounded heroes, many of them multiple amputees, from our wars. They are largely forgotten men, and one has to wonder what they think of all this. Our returning 52 "heroes" are well aware of the fickleness of

public adulation. While it must be cheering to them to know their country cared, they cannot eat adulation, and being able to make a living after the tumult and the shouting dies is what they are really concerned about.

They should be. We do a lot better job of welcoming our heroes than of sustaining them. Hail, and then, farewell!

J.B.T.



Child Crusher Law

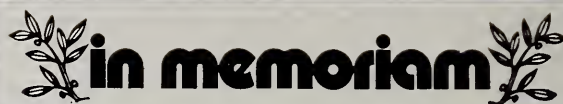
To the Editor:

I will be glad when certain individuals such as yourself come to the realization that it is impossible to protect the world from itself (Smash! Crinkle! Crunch! *J Tenn Med Assoc* 74: 53-54, 1981). I do not believe that the State of Tennessee has any place in directing parents in the care of their children as long as their actions are responsible. I myself generally use such restraint devices but I do not believe that it should be mandatory. However, if you are going to persist along this line why don't we require the further:

- (1) That there be a mandatory death penalty to any adult whose car is stopped and everyone does not have their seatbelt fastened.
- (2) Why don't we attach a mandatory 10 year jail sentence for anyone who exceeds 35 mph?
- (3) Why don't we remove all metallic surfaces from the outsides of all vehicles and cover all front and side surfaces of vehicles with a minimum of 4 feet of expanded rubber foam?

Now really Dr. Thomison, we have enough rules and regulations in this country. Why do you have to meddle in people's personal affairs even further? All be it your crusade is lily-white and vested with great interest, why do we need an additional 15 bureaucrats in Nashville to enforce this law?

Halbert B. Dodd, II, M.D.
1020 Reelfoot Ave.
Union City, TN 38261



E. McCall Morris, age 84. Died December 23, 1980. Graduate of Eclectic School of Medicine in Cincinnati, Ohio. Member of Northwest Tennessee Academy of Medicine.

new members

The JOURNAL takes this opportunity to welcome these new members to the Tennessee Medical Association.

BLOUNT COUNTY MEDICAL SOCIETY

William R. Moore, M.D., Maryville

Allan Romans, M.D., Maryville

CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY

Douglas L. Bechard, M.D., Chattanooga

Lina B. Caldwell, M.D., Chattanooga

Susan J. McLean, M.D., Chattanooga

Jerrold Lee Selzer, M.D., Chattanooga

JACKSON COUNTY MEDICAL SOCIETY

Gregory Kienzle, M.D., Gainesboro

KNOXVILLE ACADEMY OF MEDICINE

James H. Bowman, M.D., Knoxville

Robert A. Crawley, M.D., Knoxville

Allan Eric Davis, M.D., Knoxville

Richard J. DePeriso, M.D., Knoxville

John H. Dougherty, Jr., M.D., Knoxville

Patricia L. Eachus, M.D., Knoxville

Amy B. Fitzpatrick, M.D., Knoxville

Barry D. Frame, M.D., Knoxville

Wahid T. Hanna, M.D., Knoxville

Geoffrey C. Kincaid, M.D., Knoxville

J. David Owen M.D., Knoxville

Stephen C. Prinz, M.D., Knoxville

MARSHALL COUNTY MEDICAL SOCIETY

Michael J. Tepedino, M.D., Lewisburg

MONTGOMERY COUNTY MEDICAL SOCIETY

Daniel Ernest Martin, M.D., Erin

NASHVILLE ACADEMY OF MEDICINE

Robert C. Ripley, M.D., Nashville

NORTHWEST TENNESSEE ACADEMY OF MEDICINE

Michael Hinds, M.D., Martin
Gilbert Jones, M.D., Martin
Esteban Jose Palacios, M.D., Dyersburg

SULLIVAN-JOHNSON COUNTY MEDICAL SOCIETY

William M. Bell, M.D., Kingsport
Alan L. Gorrell, M.D., Bristol
Guy E. Henning, M.D., Bristol
Thomas D. Makres, M.D., Bristol
Ann C. Mortell, M.D., Kingsport
Cynthia J. Owens, M.D., Kingsport
Robert A. Rosser, M.D., Kingsport
Archer K. Tullidge, M.D., Kingsport

WASHINGTON-CARTER-UNICOI COUNTY MEDICAL ASSOCIATION

William L. Maden, M.D., Johnson City

clude *Monte B. Biggs, M.D.*, chief of staff-elect; and *Vali Khairollahi, M.D.*, secretary.

Robert D. Kirkpatrick, M.D., Memphis, has been named a Fellow of the American Academy of Family Physicians.

B. F. Overholt, M.D., has been installed as chief of staff of St. Mary's Medical Center in Knoxville for 1981 and 1982. Other officers elected include *John Nelson, M.D.*, chief of staff-elect; and *Carl Matthews, M.D.*, secretary.

Robert Sanders, M.D., Rutherford County public health director, has received the Murfreesboro Serotoma Club's first "Service to Mankind" award, due to his efforts in the promotion of child safety in automobiles.

personal news

Bruce B. Bellomy, M.D., has been named chief of staff at Fort Sanders Medical Center in Knoxville for 1981. Other officers elected include *James R. Guyton, Jr., M.D.*, chief of staff-elect; and *George Krisle, M.D.*, secretary.

C. Dale Elliott, M.D., Maryville, has been named a Fellow of the American College of Cardiology.

G. Edward Hazlehurst, M.D., has been elected chief of staff at Jackson-Madison County General Hospital for 1981. Other officers elected include *Blair D. Erb, M.D.*, assistant chief of staff; and *E. Hunter Welles, III, M.D.*, secretary.

Nat E. Hyder, Jr., M.D., Johnson City, has been appointed to the Commission of Health Care Services of the American Academy of Family Physicians.

Robert Kerlan, M.D., has been elected president of the medical staff of St. Francis Hospital in Memphis for 1981. Other officers elected include *J. P. Anderson, M.D.*, president-elect; and *Barry Boston, M.D.*, secretary.

Fred A. Killeffer, M.D., has been elected chief of staff at the University Hospital in the UT Center for the Health Sciences, Knoxville. Other officers elected in-

TMA Members Receive AMA Physician's Recognition Award

Seventeen TMA members qualified for the AMA Physician's Recognition Award during the month of December, 1980.

To qualify for the PRA, a minimum of 150 hours of continuing medical education must be earned over a three-year period; 60 of these hours must be Category 1.

This list does not include members who reside in other states. Names of additional PRA recipients will be published as they are received from AMA.

Charles William Arnold, M.D., Cleveland
Larry Coy Collins, M.D., Cleveland
Humberto Coto, M.D., Johnson City
Ted Lawrence Flickinger, M.D., Maryville
Harvey H. Grime, M.D., Lebanon
Theodore F. Haase, M.D., Knoxville
James F. Hudgens, M.D., Knoxville
Vernon Hutton, M.D., Nashville
Barry Park McIntosh, M.D., Paris
Merrill Dennis Moore, M.D., Knoxville
Frances K. Patterson, M.D., Knoxville
John L. Sawyers, M.D., Nashville
Frederick D. Slaughter, M.D., Bristol
Archibald Y. Smith, M.D., Signal Mountain
Burnice Hoyle Webster, M.D., Nashville
Thomas Jefferson White, M.D., Memphis
Melborne A. Williams, M.D., Nashville

medical news in tennessee

Vanderbilt Medical Vice President Named

Dr. Roscoe R. Robinson was appointed vice president for medical affairs at Vanderbilt University, effective July 1. The former associate vice president for health affairs at Duke University and chief executive officer at Duke Hospital, he succeeds Dr. Vernon Wilson, who retires in June 1981 after a six-year term as vice president.

Robinson graduated from the University of Oklahoma School of Medicine in 1954, and served residencies at Duke and Columbia University hospitals before returning to Duke in 1960. He is director of Duke's division of nephrology and Florence McAlister Professor of Medicine.

Robinson is a national consultant in medicine to the Surgeon General, U.S. Air Force; president-elect of the American Society for Nephrology; and a member of the board of governors of the American Board of Internal Medicine. He is editor of *Kidney International*, the official publication of the International Society of Nephrology, and is a member of the editorial board of *Perspectives in Nephrology and Hypertension*.

national news

From the AMA's Office in Washington, D.C.

Health Budget Cuts Forecast

Prime targets for the cost-cutting knives of the new administration and Congress would appear to be the government's gargantuan entitlement programs such as Social Security, Medicare and Medicaid which account for 95% of the \$258-billion budget of the Health and Human Services (HHS) Department. The HHS budget is approximately one third of the federal budget.

The Reagan administration's health budget—a reworking of the Carter budget—is expected shortly and most likely will contain sweeping changes, particularly in the area of Medicare and Medicaid.

HHS Secretary Richard S. Schweiker pointed out during his confirmation hearings that he would have to work closely with Congress as the entitlement programs are not within the administration's control.

In Congress, Reps. Richard Gephardt (D-Mo.) and David Stockman (R-Mich.) have reintroduced their procompetition national health plan that would end federal health planning and remove many of the tax deductions for private health insurance. Stockman has been appointed director of the Office of Management and Budget.

The House and Senate have about completed the selection of committee members, chairmanships, and subcommittee assignments as the lawmakers buckled down for a long and arduous session.

In addition to whatever health legislation that may be proposed by the Reagan administration, the Congress also faces the task of deciding the fate of a number of major health programs that expire this year. These programs include health planning, HMOs, and health manpower.

Certainly much of the activity of the new Congress will be centered on the size of the health budget with conservatives determined to make large cuts and liberals digging in to resist the inroads.

Schweiker New HHS Secretary

Former Pennsylvania Senator Schweiker breezed through the Senate Finance Committee confirmation hearings for his appointment as HHS Secretary. In addition to his concern with the entitlement programs that consume so much of his budget he said that "more emphasis must be placed on eliminating fraud, waste, and abuse. It will be my intention to give strong support to the Inspector General's Office in this regard and to work closely with the General Accounting Office as well."

As one example, Schweiker said that he intends to work with the Justice Department to attack fraud and abuse of the Medicaid program.

In his prepared statement Schweiker said, "I believe the new Secretary must work closely with the new administration and the Congress to curb inflation, which has so aptly been termed the cruelest tax of all on the poor and the elderly citizens who rely so heavily on HHS programs."

Schweiker also said that the Reagan administration probably will not support a comprehensive national health insurance program but that its approach to the problem might be to combine catastrophic coverage and a program to fill in the gaps for the 10% of the population who have no coverage.

He said that he was against any federal regulation approach to hospital cost containment, but that it was his intention to resurrect a voluntary effort to reduce increasing costs of medical care. He also said that he

would reinforce and not threaten these programs with antitrust suits. He agreed with Senator David L. Boren (D-Okla.) that a bill to set up pilot programs for states to experiment with cost-saving programs would be a good approach. He said he emphasizes the competitive approach to reducing hospital costs.

Schweiker also said that a lot can be done in home health care delivery, especially for the elderly, and he would look at reimbursement procedures to encourage the reinvestment of resources in lesser costing health care as an alternative to putting elderly in nursing homes.

Freshman Senator Steven D. Symms (R-Idaho) asked Schweiker about PSROs pointing out that the AMA House of Delegates had recently opposed them after originally supporting them. Schweiker said that PSROs would be at the top of the list of programs for reevaluation. He said he had made no final judgment, but that preliminary figures indicating that PSROs are spending more money than they are saving are discouraging.

In response to criticism of the Food and Drug Administration by newly elected Senator Charles E. Grassley (R-Iowa), Schweiker said that he had led the fight to oppose the banning of saccharine and that the Delaney clause needed to be revised.

There was mostly praise and good wishes from his colleagues in the Senate Finance Committee, but there was some good humored poking from the new minority Democratic Senators Russell B. Long of Louisiana and Daniel Patrick Moynihan of New York.

Long, the outgoing chairman of the Finance Committee, compared Schweiker to a Gulliver going into the land of the Lilliputians. He wondered if Schweiker would be able to control this government island.

Schweiker responded that he didn't think the wool would be pulled over his eyes and that he was going to work with Congress.

Senator Moynihan questioned Schweiker on whether he was going to follow the Republican platform's pledge to make a wholesale transfer of federal welfare programs to state governments and asked if Schweiker intended to repeal the Medicaid program or to transfer the Social Security system to state governments.

Schweiker said that he did not consider the Social Security system to be welfare and that his first priority as incoming HHS Secretary would be to maintain the integrity of the system and to solve its short- and long-range problems.

In response to a question by Senator Max Baucus (D-Mont.), Schweiker said he would "like to be remembered as the HHS Secretary who put preventive medicine at the top of the health care agenda." He stated he would especially support research in this area, and that he believes in an emphasis on keeping people well to avoid disease. "I'm a two-mile-a-day

jogger," he said. "I intend to continue my efforts in health promotion and disease prevention within the Department, emphasizing cost effective, preventive health care strategies."

Carter Health Budget to Congress

Former President Carter sent Congress a \$73.5-billion budget for the government's civilian health programs next fiscal year, up from the \$64.5 billion this year. The outgoing budget stands to be worked over by the new Reagan administration.

There's little chance the overall totals will differ much, since the bulk of the Carter budget's increase comes from inexorable rises in Medicare—from \$38.6 billion to \$45.3 billion—and Medicaid—from \$15.6 billion to \$17.2 billion.

The Public Health Service received a miserly \$8.7 billion, up 5.9%, for its discretionary health programs, several of which are being eyed by the Reagan administration for extinction or deep slashes.

The Carter budget mentions national health insurance only in passing, saying that it continues to support enactment of the Carter plan "when budget resources are available." At the same time, the budget assumes congressional enactment of the Child Health Assurance Program (CHAP) with a \$50-million request. For the first time in three years, the budget does not assume congressional passage of the hospital cost containment plan that was defeated in the last Congress and that is stoutly opposed by the new administration.

Health programs put down for sizeable increases include Community Health Centers, National Health Service Corps, Genetic Screening, Communicable Disease Center's health promotion programs, some of the National Institutes for Health (NIH) and the National Institute on Alcohol Abuse and Alcoholism.

The major cutback eyed by the outgoing administration was, as usual, in medical education through elimination of the \$72 million for capitation grants and \$73 million for other health professions education programs, including \$48 million for nursing education aid.

The "lame duck" budget says that HHS will continue to encourage hospitals to keep expenditures from rising more than 14% this year with "strong efforts to monitor hospital compliance." The budget seeks legislative authority from Congress to link Medicare-Medicaid reimbursement to hospitals' compliance with local planning recommendations.

All of the institutes for federal medical research programs were allotted some increases, but the total \$255-million gain is only 7.1% of the NIH's \$3.8-billion budget. With an increase of \$46 million, the National Cancer Institute would go over the \$1-billion mark for the first time. But the increase was

the smallest percentage increase (4.6%) of all the institutes. Institutes allowed the largest gains were Environmental Health Sciences, Eye, Aging and Neurological.

The Carter budget proposes no change in funding for the Professional Standards Review Organization (PSRO) program, but predicts that PSROs will save the government \$244 million through reducing the number of Medicare hospital days and reducing inappropriate medical care. The PSRO program is rumored to be vulnerable under the Reagan administration.

The \$33-million increase, or 36%, proposed for the National Health Service Corps would enable the Corps to swell its strength to 3,570 people next year. HHS Secretary Schweiker was critical of the Corps expansion at congressional hearings last year.

Health Maintenance Organizations (HMOs) would remain at the same level as last year with the loan and loan guarantee fund recapitalized with \$17 million plus \$48 million for grants for development of new HMOs and expansion of existing ones.

The health planning budget was stand-pat at \$147 million, possibly because the Reagan administration is known to be hostile to the program. The budget proposes that a voluntary incentive grant program of \$13 million be set up to channel discretionary funding through the state health planning agencies to health systems agencies. In order to get the money, the HSAs would have to establish special cost containment programs for reducing beds or construction.

SS Beneficiaries: Privileged Class??

A panel of economists has told the Senate Budget Committee that Social Security benefits must be cut in order to balance the federal budget.

Former Federal Reserve Board Chairman Arthur Burns said Social Security beneficiaries are a "privileged class" because benefits have increased faster than wages in recent years and are tax exempt.

Barry Bosworth, former director of the Council on Wage and Price Stability, said "you have got to get into programs such as Social Security and cut them."

The Reagan administration has promised to seek ways to cut back on the size of the Social Security program.

Reagan Axes Nursing Home Regs

The nursing home industry, which has compared itself to David fighting Goliath in its court fight against proposed new government regulations, came out victorious thanks to the new administration.

The regulations were a lengthy list of guarantees for patients such as privacy, access to records, visiting hours, etc. that nursing homes claimed would cost them \$500 million a year to obey.

The proposals were issued as one of the final acts of former HHS Secretary Patricia Harris. They were swiftly withdrawn the day after the inauguration of President Reagan. The Department said "the potential impact on both providers and consumers of health care needs to be assessed further."

The notice of withdrawal said that Harris improperly ignored a congressional order that HHS consult a General Accounting Office study of the impact of the regulations before making a final decision. But HHS officials said the real reason was that new HHS Secretary Schweiker opposed the regulations.

Harris Pulls Plug on GMENAC

The decision by former HHS Secretary Harris not to recharter the Graduate Medical Education National Advisory Committee (GMENAC) was a setback for supporters who wanted to make the committee a permanent advisory group.

The committee last year issued a lengthy, controversial report urging reductions in medical school enrollments.

The AMA opposed making GMENAC permanent. An AMA task force warned that this would make it more likely that GMENAC recommendations would be readily transformed into federal regulations.

Harris' move leaves the option open to new HHS Secretary Schweiker to proceed on GMENAC's status. The House-passed Health Manpower bill last year contained a provision cementing GMENAC's status, but the Senate bill was silent on the subject.

announcements

CALENDAR OF MEETINGS

NATIONAL

- | | |
|-----------|--|
| April 1-4 | American Burn Association — Sheraton Washington Hotel, Washington, D.C. |
| April 3 | American Association of Certified Allergists — Sheraton Washington Hotel, Washington, D.C. |
| April 3-5 | AMA Chicago Regional Meeting — Hyatt Regency Hotel |

April 4-8	American College of Allergists — Sheraton Washington Hotel, Washington, D.C.	April 30-May 2	American Geriatrics Society — Boston Park Plaza, Boston
April 5-9	American Association of Neurological Surgeons — Sheraton Hotel, Boston	April 30-May 2	American Society of Clinical Oncology — Sheraton Hotel, Washington, D.C.
April 5-9	American Society of Neuroradiology — Marriott Hotel, Chicago	May 4-7	Aerospace Medical Association — San Antonio Convention Center, San Antonio, Tex.
April 6-9	American College of Physicians — Crown Center, Kansas City, Mo.	May 6-9	Virginia Society of Ophthalmology and Otolaryngology, 62nd Annual Meeting — Cavalier Hotel, Virginia Beach, Va.
April 6-10	American Psychoanalytic Association — Condado Beach-La Concha Hotels, San Juan, Puerto Rico	May 7-10	American Association for Pediatric Ophthalmology and Strabismus — Disney World, Orlando, Fla.
April 10-15	American Medical Society of Alcoholism — Fairmont Hotel, New Orleans	May 8-9	AMA Hospital Medical Staff Leadership Seminar — Hyatt Regency, Capitol Hill, Washington, D.C.
April 12-17	American Association of Immunologists — Hyatt Regency, Atlanta	May 8-10	American Society for Adolescent Psychiatry — New Orleans
April 12-17	American Association of Pathologists — Hyatt Regency, Atlanta	May 10-13	American Association of Plastic Surgeons — Colonial Williamsburg, Williamsburg, Va.
April 12-17	American Society for Pharmacology and Experimental Therapeutics — Atlanta	May 10-13	American Lung Association — Detroit Plaza, Detroit
April 22-30	American College of Obstetricians and Gynecologists — Las Vegas Hilton	May 10-13	American Thoracic Society — Detroit Plaza, Detroit
April 22-24	American Surgical Association — Hyatt Regency, Chicago	May 10-14	American Urological Association — Sheraton-Boston, Boston
April 23-25	American Cancer Society — Washington Hilton Hotel, Washington, D.C.	May 11-13	American Association for Thoracic Surgery — Hilton, Washington, D.C.
April 23-25	Congress on Medical Education — Palmer House, Chicago	May 13-16	American College of Legal Medicine — Hotel Del Coronado, Coronado, Calif.
April 24-26	American Society for Clinical Nutrition — San Francisco Hilton	May 14-15	American Association of Clinical Urologists — Radisson-Muehlebach, Kansas City, Mo.
April 24-26	International Eye Congress (Metro Eye and Ear Hosp) — Hyatt Regency, Atlanta	May 16-22	American Gastroenterological Association — Hilton at Rockefeller Center, New York
April 25-27	American Federation for Clinical Research — San Francisco Hilton	May 16-22	American Society for Gastrointestinal Endoscopy — Hilton, New York
April 26-29	American Fracture Association — Regency Hyatt House, Indianapolis	May 22-24	Southeastern Dermatological Association — Mills House Hotel, Charleston, S.C.
April 26-29	West Virginia Academy of Ophthalmology and Otolaryngology — Greenbrier, White Sulphur Springs, W.Va.	May 27-30	American College of Sports Medicine — Sheraton Bal Harbour, Miami Beach
April 26-May 1	American Occupational Medical Association — Hilton Hotel, Atlanta		
April 28-May 2	American Pediatric Society — San Francisco Hilton		
April 29-May 2	American Pediatric Surgical Association — Innisbrook, Tarpon Springs, Fla.	April 8-11	Tennessee Medical Association Annual Meeting — Hyatt Regency Hotel, Knoxville

STATE

Tennessee Medical Association Annual Meeting — Hyatt Regency Hotel, Knoxville

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Highlights of the TMA Board of Trustees Meeting

January 10-11, 1981

The following is a summary of the major actions taken by the Board of Trustees of the Tennessee Medical Association at its regular first quarter meeting in Nashville on January 10-11, 1981.

THE BOARD:

Appointment of Standing & Special Committees for 1981

Considered and nominated physicians to serve on each of the Standing and Special Committees of the Tennessee Medical Association. In considering the appointments, trustees took into consideration geographical locations and established the terms of the committee members in keeping with the Constitution and By-Law requirements. All appointments will become effective at the conclusion of the TMA Annual Meeting in April.

Ad Hoc Committee RE: 5th AMA Delegate

Heard a report on the Ad Hoc Committee to study and recommend a method of electing TMA's fifth AMA delegate. The Board accepted a recommendation from Vice-Chairman C. C. Woodcock, M.D. and will present it to the House of Delegates at the Annual Meeting in April. This is the resolution:

1. The first three Tennessee delegates and alternate delegates should be elected from each of the grand divisions of the state as at present.
2. Fourth and fifth delegates and alternate delegates should be selected in the following manner:
 - a. The fourth and fifth delegates should come from different grand divisions of the state.
 - b. The fourth and fifth alternate delegates should come from different grand divisions of the state.
 - c. When any of the above are to be replaced, the replacement should come from the grand division of the state most recently without a representative in the category being replaced, i.e., delegate or alternate delegate.

SVMIC Report

Heard a report that the Underwriting Department of State Volunteer Mutual Insurance Company, which has been under the management of Corroon and Black, has moved under the direct management of SVMIC. During the past year, claims have escalated and claims' losses have slightly increased; however, at the present time there is not anticipation of having to raise premiums.

1982 Annual Meeting

Agreed that in future scheduling of TMA Annual Meetings, a location be selected that can accommodate both the TMA and the Auxiliary in one facility and if this cannot be accomplished, that a site be selected where both meetings can be held within a reasonable proximity of each other.

1986 Annual Meeting

Agreed that the 1986 Annual Meeting be held at Opryland Hotel in Nashville the third week in April.

Community Service Award

Agreed to give the TMA Community Service Awards to Mr. Gene Roberts, Nashville, Public Safety Commissioner; Sister Thomas de

Sales, Chattanooga, Administrator of Memorial Hospital; and Judge Wilford Parks, Jr., of Lake County.

TMA Nominating Committee

Appointed the following members to the Nominating Committee for the House of Delegates: *East Tennessee*: E. Kent Carter, M.D., Kingsport; John H. Burkhart, M.D., Knoxville; and David H. Turner, M.D., Chattanooga. *Middle Tennessee*: Clarence R. Sanders, M.D., Gallatin; George W. Holcomb, Jr., M.D., Nashville; and James C. Bradshaw, Jr., M.D., Lebanon. *West Tennessee*: John B. Dorian, M.D., Memphis; Thomas K. Ballard, M.D., Jackson; and James H. Ragsdale, M.D., Union City. Agreed that an amendment to the Constitution and By-Laws be drafted to be presented to the House of Delegates in April recommending that the terms of members serving on the Nominating Committees not exceed five consecutive years.

Voluntary Cost Containment Committee

Named H. Barrett Heywood, III, M.D. to fill the vacancy of C. Robert Clark, M.D. on the Voluntary Cost Containment Committee.

TMA-Student Education Fund Board

Dr. Clendenin reported that the terms of Allen S. Boyd, M.D., Memphis, and James G. Quinn, M.D., Chattanooga, were expiring on the TMA-Student Education Fund Board. Reappointed Drs. Boyd and Quinn to three-year terms on the TMA-SEF Board.

IMPACT

Appointed Rex Amonette, M.D., Memphis, to fill the vacancy left by the resignation of David W. Dunavant, M.D., on the IMPACT Board of Directors.

Appointment of TMA Attorney and Accountant

Reappointed Mr. Charles L. Cornelius, Jr., as TMA's attorney for 1981 and Mr. Ezra Jones as TMA's accountant for 1981.

Distinguished Service Award

Named J. Kelley Avery, M.D., Union City; Vernon E. Wilson, M.D., Nashville; and Thomas G. Dorrity, M.D., Memphis, to receive the TMA Distinguished Service Awards at the April Annual Meeting.

Proposed Legislation from Department of Mental Health and Mental Retardation

Heard reports from Mr. Roger Blue, Tennessee Association for Retarded Children and Adults, and Mr. Rick Sivley, Tennessee Department of Mental Health and Mental Retardation, regarding legislation proposed by the Tennessee Department of Mental Health and Mental Retardation, which would allow the Department to contract with private vendors, for profit, the total maintenance of state-operated developmental centers for mental retardation and state mental health institutes for the mentally ill. The Board agreed that the matter be referred to the TMA Legislative Committee with a recommendation from the Board that the enabling act be so worded that it would be limited initially to pilot projects so that it could be determined if this is a viable solution or alternative to what is currently being done.

1980 Financial Statement

Approved the 1980 TMA Financial Statement and the 1981 TMA Budget.

Travel Committee Recommendations

Agreed that TMA sponsor an INTRAV Western Mediterranean Air/Sea Cruise in October, 1981.

CPR or CPA?



If you just about go into cardiac arrest each time you pay taxes, you need to practice a little preventive medicine. You need a CPA, a Certified Public Accountant.

You may be paying more taxes than necessary. And a CPA knows how to help you find out. He does a lot more than just prepare tax returns.

CPA's will advise and assist you in your tax planning so you can keep more of the money you make.

Start now in preventing that next heart attack. Consult a CPA.



TENNESSEE SOCIETY OF
CERTIFIED PUBLIC ACCOUNTANTS

The continuing medical education accreditation program of the TMA has full approval by the Council on Medical Education of the AMA. An accredited institution or organization may designate for Category 1 credit toward the AMA Physician's Recognition Award those CME activities that meet appropriate guidelines. If you wish information as to how your hospital or society may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203.

IMPORTANT NOTICE

Published in this section are all educational opportunities which come to our attention which might be of interest to our membership. As some of these are very long, full year schedules, and others are detailed descriptions of courses, in order to conserve space, most of them will be published in only one issue of the Journal.

IN TENNESSEE

VANDERBILT UNIVERSITY SCHOOL OF MEDICINE

Clinical Training Program For Practicing Physicians

Opportunities for advanced clinical education for physicians in family practice and in various subspecialties have been developed by the School of Medicine and the Division of Continuing Education of Vanderbilt University. The practicing physician, with the guidance of the participating department chairman, can plan an individualized program of one to four weeks to meet recognized needs and interests. The experience will include contact with patients, discussion with clinical and academic faculty, conferences, ward rounds, learning individual procedures, observing new surgical techniques, and access to excellent library resources. Experience in more than one discipline may be included.

Participating Departments and Divisions

Allergy & Immunology	Samuel Marney, M.D.
Anesthesiology	Bradley E. Smith, M.D.
Cardiology	Gottlieb C. Friesinger, III, M.D.
Chest Diseases	James D. Snell, M.D.
Clinical Pharmacology	John A. Oates, M.D.
Dermatology	Lloyd King, M.D.
Diabetes	Oscar B. Crofford, M.D.
Endocrinology	David Rabin, M.D.
	David N. Orth, M.D.
Gastroenterology	Steven Schenker, M.D.
General Internal Medicine	W. Anderson Spickard, M.D.
Hematology	Sanford B. Krantz, M.D.
Infectious Diseases	Zell A. McGee, M.D.
Medicine	Grant W. Liddle, M.D.
Neurology	Gerald M. Fenichel, M.D.

Obstetrics & Gynecology	Lonnie S. Burnett, M.D.
Oncology	Robert Oldham, M.D.
Orthopedics	Paul W. Griffin, M.D.
Pathology	William H. Hartmann, M.D.
Pediatrics	David T. Karzon, M.D.
Psychiatry	Marc H. Hollender, M.D.
Radiology	A. Everette James, Jr., Sc.M., J.D., M.D.
Renal Diseases	H. Earl Ginn, M.D.
Rheumatology	John S. Sergent, M.D.
Surgery	
Cancer Chemotherapy	Vernon H. Reynolds, M.D.
General	H. William Scott, Jr., M.D.
Neurological	William F. Meacham, M.D.
Ophthalmology	James H. Elliott, M.D.
Oral	H. David Hall, D.M.D.
Pediatric	James A. O'Neill, M.D.
Plastic	John B. Lynch, M.D.
Renal Transplantation	Robert E. Richie, M.D.
Thoracic & Cardiac	Harvey W. Bender, M.D.
Urology	Robert K. Rhamy, M.D.

Eligibility: All licensed physicians are eligible.

Administrative Fee: \$200 per week.

Credit: American Medical Association Physician's Recognition Award (Category 1) and American Academy of Family Physician's Continuing Education Accreditation.

Application: For further information and application, contact Paul B. Slaton, M.D., Director, Continuing Medical Education, Vanderbilt University Medical Center, Nashville, TN 37232, Tel. (615) 322-2716.

Continuing Education Schedule

April 3-4	Annual Barney Brooks Lecture in Surgery and the H. William Scott, Jr. Society, Scientific Sessions
April 13-17	10th Annual James C. Overall Visiting Professor in Pediatrics: Gastroenterology
May 8-9	Annual Update in Gynecologic Oncology, Endocrinology and Infertility and the Conrad Julian Memorial Lecture in Gynecologic Oncology (9 hours)
May 20-21	20th Annual Seminar in Psychiatry (for nonpsychiatrists) (11 hours)
May 28-30	Diagnostic Sonography Update
May 30	Symposium on Enzyme Regulation
June 8-10	Amplification for the Hearing-Impaired: Research Needs
July 16-18	3rd Annual Mountain Meeting (Internal Medicine)—Asheville, N.C. (12 hours)
July	Neurology and Speech Pathology: The Problem of Aphasia
July 22-25	4th Annual Symposium on Contemporary Clinical Neurology — Hilton Head Island, S.C. (16 hours)

Sept. 18-19	12th Annual Pediatrics Symposium: Immunology and Allergy (10 hours)
September	Blood Banking: Recent Medical and Technical Advances
Oct. 1-4	3rd Annual Medical Alumni Symposium
Oct. 28-30	Robert M. Buchanan Lecturer in Dermatology
Oct. 29-31	Update in Therapeutic Decision-Making (ACP Regional Meeting Scientific Sessions)
November	Annual Rhamy-Shelley Lectureship in Urology
November	Update in Anesthesiology
Dec. 4-5	High Risk Obstetrics Seminar and the Everett M. Clayton Memorial Lecture (10 hours)

For information contact Division of Continuing Medical Education, Vanderbilt School of Medicine, Nashville, TN 37232, Tel. (615) 322-2716.

MEHARRY MEDICAL COLLEGE SCHOOL OF MEDICINE

Extended Continuing Education Program

Arrangements have been made with the following services and departments in the medical school to allow practicing physicians to participate in that service's activities for a period of one to four weeks. This program provides an opportunity for physicians to study in depth for a specified period. The schedule of activities is individualized in response to the physician's request by the participating department. The experience includes conferences, ward rounds, audiovisual materials and contact with patients, residents and faculty.

Participating Departments

Anesthesiology	Ramon S. Harris, M.D.
Family Practice	John Arradondo, M.D.
Internal Medicine	
Cardiology	John Thomas, M.D. Kermit R. Brown, M.D. Qamar A. Kahn, M.D.
Chest Disease	Joseph M. Stinson, M.D. Paul A. Talley, M.D. Edward A. Mays, M.D.
Dermatology	Thomas W. Johnson, M.D. David Horowitz, M.D.
Gastroenterology	Ludwald O. P. Perry, M.D. Buntwal M. Somayaji, M.D.
General Medicine	Edward A. Mays, M.D.
Hematology/Oncology	Robert S. Hardy, M.D.
Neurology	Calvin L. Calhoun, Sr., M.D. Gregory Samaras, M.D. Henry W. Foster, M.D.
Obstetrics & Gynecology	Axel C. Hansen, M.D.
Ophthalmology	Wallace T. Dooley, M.D.
Orthopedics	Louis D. Green, M.D. John C. Ashhurst, M.D.
Pathology	E. Perry Crump, M.D.
Pediatrics	
Surgery	
General	Louis J. Bernard, M.D.
Neurological	Charles E. Brown, M.D.
Thoracic and Cardiovascular	David B. Todd, M.D. Ira D. Thompson, M.D.
Urology	Marcelle R. Hamberg, M.D.

Fee: \$100 per week.

Credit: American Medical Association Physician's Recognition Award (Category 1). American Academy of Family Physicians Continuing Education Accreditation and Continuing Education Units by Meharry Medical College.

Application: For further information contact Frank A. Perry, Sr., M.D., Director, Continuing Education, Meharry Medical College, 1005 18th Ave. North, Nashville, TN 37208, Tel. (615) 327-6235.

EAST TENNESSEE STATE UNIVERSITY Quillen-Dishner College of Medicine

April 10-11	A Review of Pulmonary Medicine
April 24-25	Gynecologic Endocrinology: Infertility-Hirsutism-Menstrual Abnormalities
May 13	Substance Abuse in East Tennessee
May 20-	International Health Education Course
June 4	
June 4	J. Carroll Long Lecture
June 5-6	Geriatrics II—Sexuality and the Aging
July 18	Basic Science Review III: Psychopharmacology
Aug. 15	Stress in Medical Practice
Sept. 19	Advances in Laboratory Medicine
Oct. 7-9	Infection Control
Oct. 16	Pediatrics Prep III: Neonatology
Nov. 2-6	CPR: Faculty Inservice

For information contact Office of Continuing Medical Education, East Tennessee State University, Quillen-Dishner College of Medicine, Johnson City, TN 37614, Tel. (615) 928-6426, ext. 204.

UNIVERSITY OF TENNESSEE CENTER FOR THE HEALTH SCIENCES

Continuing Education Schedule

This comprehensive listing of UTCHS courses includes programs of the Chattanooga, Knoxville, and Memphis units. The codes (C), (K), and (M) indicate the continuing education unit handling the arrangements for a particular program.

April 2-3	(C)	Workup and Treatment of Anemia
April 5-8	(M)	Otolaryngology Allergy Course
April 23-24	(M)	12th Annual Leigh Buring Conference—The Gifted Child
April 23-24	(C)	Case Studies and Office Orthopedics
April 23-25	(K)	4th Annual Family Practice Update and Review Course

- | | | |
|--------------------|-----|---|
| April 30-
May 1 | (C) | Ultrasound and CAT Scan for Family Physicians |
| May 7-8 | (C) | Solving Problems in Drug Therapy |
| May 15 | (M) | Cardiac Risk Factor Modification |
| May 27-30 | (M) | Rhinoplasty |
| June 4-7 | (C) | Family Medicine Review |
| June 4-8 | (K) | 3rd Annual Practical Otolaryngology Course for the Primary Care Physician |
| June 15-18 | (C) | Infection in the Emergency Room |
| June 16-17 | (M) | 5th National Conference on Patient Education in the Primary Care Setting (sponsor: Dept. of Family Medicine) — Hyatt Regency, Memphis |
| June 22-25 | (C) | Diagnostic Radiology for the Primary Care Physician — Orlando, Fla. |
| July 10-12 | (M) | Cardiac Emergencies — Snowmass, Colo. |
| Aug. 12-15 | (C) | Emergencies in Obstetrics and Gynecology — Gatlinburg |

Community-Based CME

Knoxville Campus

Blount Memorial Hospital; Maryville, Tenn.
Every Tuesday; 7-8 a.m. (1 hr. credit)

Jellico Hospital; Jellico, Tenn.
Monthly, third Tuesday; 7-9 p.m. (2 hrs. credit)

Morristown-Hamblen County Hospital; Morristown, Tenn.
Alternate months, third Tuesday; 6:30-8 p.m. (1.5 hrs. credit)

Sweetwater Community Hospital; Sweetwater, Tenn.
Monthly, second Wednesday; 12:00 noon (1 hr. credit)

Takoma Hospital; Greeneville, Tenn.
Monthly, dates vary; 6:30 p.m. (1-2 hrs. credit)

Memphis Campus

UPDATES IN MEDICINE

Carroll County Hospital; Huntingdon, Tenn.
McKenzie Memorial Hospital; McKenzie, Tenn.
Henry County Hospital; Paris, Tenn.

Monthly, third Monday; 6:15-9 p.m. (2 hrs. credit); locations rotate.

If you would like assistance in planning a community-based CME program, contact the Associate Dean for CME and every attempt will be made to assist you through one of our three campuses.

For further information about any of these courses, please call the appropriate individuals below:

(C) Mr. LeRoy J. Pickles, Chattanooga
Tel. (615) 756-3370

(K) Mr. Jim Farris, Knoxville
Tel. (615) 971-3345

(M) Ms. Grace Wagner, Memphis
Tel. (901) 528-5547

or write or telephone:

Associate Dean for CME
University of Tennessee
College of Medicine
800 Madison Ave.
Memphis, TN 38163
Tel. (901) 528-5605

BAPTIST MEMORIAL HOSPITAL

Continuing Education Schedule

April 3-4 Gastroenterology Update — Cancer of the Gastrointestinal Tract

May 15-17 Anesthesiology Update

May 21-23 Emergency Room Medicine

All seminars are held in the Frank S. Groner Education Center Auditorium, Baptist Memorial Hospital, 1st floor, 20 S. Dudley, Memphis.

For further information contact Dr. Ken Burch, Director, Educational Support Services, Baptist Memorial Hospital, 899 Madison, Memphis, TN 38146; or call toll-free 1-800-542-6848 if located in Tennessee, or 1-800-238-6893 if located outside Tennessee, and ask for Educational Support Services.

IN SURROUNDING STATES

UNIVERSITY OF KENTUCKY

Mini-Residencies in Office Management Of Emotional Problems

The objective of this course is to give physicians an ideal emotional counseling technique that fits busy office practices. The technique uses a concept of emotions that is consistent with human anatomy and psycho physiology. Yet, the technique requires no more physician time or patient cost than routine evaluations of new patients. Finally, the technique is readily understandable and easy for practitioners to apply.

One, two and three week courses. Minimum of 40 hours per week. *Tuition Fee:* \$350 per week for the 1st & 2nd week of training; \$500 for 3rd week of supervised practice with patients in the Intensive RBT Treatment Program.

For further information contact Maxie C. Maulsby, Jr., M.D., Office of Continuing Medical Education,

Dept. of RBT, University of Kentucky, Lexington, KY 40506.

Continuing Education Schedule

- April 3-4 A Practical Approach to Ophthalmic Genetics*
- April 10-11 Endocrinology for the Practicing Physician*
- May 17-22 12th Family Medicine Review — Session II*
- May 28-30 General Pediatric Review*
- June 3-5 Update in Ob-Gyn*

*Presented at Hyatt Regency Hotel, Lexington, Ky.

For information contact Frank R. Lemon, M.D., Continuing Education, College of Medicine, University of Kentucky, Lexington, KY 40536, Tel. (606) 233-5161.

MEDICAL COLLEGE OF VIRGINIA

- April 24-26 Pediatric Springfest — Williamsburg Hilton and National Conference Center, Williamsburg, Va.

For information contact Dawn G. Mueller, M.D., MCV Station, Box 276, Richmond, VA 23298, Tel. (804) 786-9966.

NORTH ALABAMA EMERGENCY MEDICAL SERVICES AGENCY

- May 20-22 Southern Regional Conference on Emergency and Critical Care Medicine — Huntsville Hilton/Von Braun Civic Center, Huntsville, Ala. (Cosponsors: University of Alabama School of Medicine — Huntsville Program; American Trauma Society; Alabama Chapter of the American Col-

lege of Emergency Physicians; Alabama Committee on Trauma.)
Credit: 18 hours AMA Category 1, ACEP, and AAFP. *Fee:* \$165.

For information contact Steven Hall, Box 2104, Decatur, AL 35602, Tel. (205) 353-3800.

BOWMAN GRAY

Courses in Ultrasound

A course in Medical Sonics, organized in eight-week segments covering basics, neurosonology, urology, abdomen, ob/gyn, cardiology, etc., will be offered from April 21-June 12, 1981. *Credit:* 30 hours per week in AMA Category 1.

Several one-week courses in Abdominal Real-Time Sonography will be held on April 6-10, July 13-17, and Aug. 10-14, 1981. *Credit:* 30 hours per week in AMA Category 1.

A seminar in Advanced Applied Ultrasound in Obstetrics will be held from June 18-20, 1981. *Credit:* 20 hours AMA Category 1.

For information contact Ms. Dorlee Canter, Postgraduate Medical Sonics, Bowman Gray School of Medicine, 300 S. Hawthorne Rd., Winston-Salem, NC 27103, Tel. (919) 748-4505.

OF SPECIAL INTEREST

AMERICAN CANCER SOCIETY

- April 23-25 National Conference on Human Values and Cancer: Psychological, Social and Ethical Issues — Washington Hilton Hotel, Washington, D.C. *Credit:* 15.5 hours AMA Category 1.

For information contact Nicholas G. Bottiglieri, M.D., American Cancer Society, National Conference on Human Values and Cancer, 777 Third Ave., New York, NY 10017, Tel. (212) 371-2900.

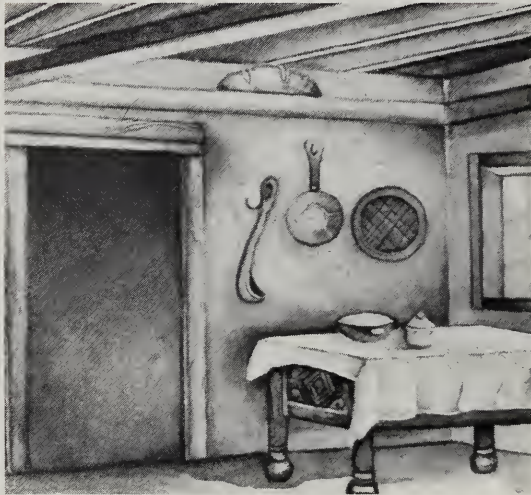
SOUTHERN REGIONAL CONFERENCE ON EMERGENCY AND CRITICAL CARE MEDICINE

May 20-22, 1981, Huntsville Hilton/Von Braun Civic Center, Huntsville, Alabama

This conference will provide the emergency department and primary care physician with an in-depth discussion and thorough review of major problems associated with the multi-system injured patient. The presentations will focus on initial assessment and contemporary treatment modalities with a special session addressing legal vulnerability in the clinical setting. Lectures are supplemented by clinical case presentations to illustrate approaches to commonly encountered problems. A distinguished guest faculty is participating in the seminar and a comprehensive written course syllabus will be provided. The program is sponsored by the North Alabama Emergency Medical Services agency and co-hosted by The University of Alabama School of Medicine, Huntsville Program, The Alabama Chapter of the American College of Emergency Physicians, The American Trauma Society and The Alabama Committee on Trauma. The program has been approved by the AMA, AAFP and ACEP for 18 Category 1 Credit Hours. For further information, contact Mr. Steven Hall, Administrator, North Alabama EMS, Inc., Box 2104, Decatur, Alabama 35602; phone (205) 353-3800.

Yesterday's Folk Remedy:

A rye loaf in the rafters.



Early in this century in Central Europe, almost every farm family kept a loaf of moldy rye bread on one of the kitchen beams. When any family member was cut or bruised, it was an old custom to cut a thin slice from the outside of the loaf, mix it into a paste with water, and apply it to the wound with a bandage. It was believed that no infection would then result from the cut.¹



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The Journal of the Tennessee
Medical Association

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of the Institute for Scientific Information

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CYCLAPEN®-W (cyclacillin)

Indications

Cyclacillin has less *in vitro* activity than other drugs in the ampicillin class and its use should be confined to these indications: Treatment of the following infections:

RESPIRATORY TRACT

Tonsillitis and pharyngitis caused by Group A beta-hemolytic streptococci
Bronchitis and pneumonia caused by *S. pneumoniae* (formerly *D. pneumoniae*)
Otitis media caused by *S. pneumoniae* (formerly *D. pneumoniae*) and *H. influenzae*
Acute exacerbation of chronic bronchitis caused by *H. influenzae**

*Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to *H. influenzae*.

SKIN AND SKIN STRUCTURES (integumentary) infections caused by Group A beta-hemolytic streptococci and staphylococci, non-penicillinase producers.

URINARY TRACT INFECTIONS caused by *E. coli* and *P. mirabilis*. (This drug should not be used in only *E. coli* and *P. mirabilis* infections other than urinary tract.)

NOTE: Perform cultures and susceptibility tests initially and during treatment to monitor effectiveness of therapy and susceptibility of bacterio. Therapy may be instituted prior to results of sensitivity testing.

Contraindications Contraindicated in individuals with history of an allergic reaction to penicillins.

Warnings Cyclacillin should only be prescribed for the indications listed herein.

Cyclacillin has less *in vitro* activity than other drugs of the ampicillin class. However, clinical trials demonstrated it is efficacious for recommended indications.

Serious and occasional fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin. Although anaphylaxis is more frequent following parenteral use, it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with history of sensitivity to multiple allergens. There are reports of patients with history of penicillin hypersensitivity reactions who experienced severe hypersensitivity reactions when treated with a cephalosporin. Before penicillin therapy, carefully inquire about previous hypersensitivity reactions to penicillins, cephalosporins and other allergens. If allergic reaction occurs, discontinue drug and initiate appropriate therapy. Serious anaphylactoid reactions require immediate emergency treatment with epinephrine. Oxygen, I.V. steroids, airway management, including intubation, should also be administered as indicated.

Precutions Prolonged use of antibiotics may promote overgrowth of nonsusceptible organisms. If superinfection occurs, take appropriate measures.

PREGNANCY: Pregnancy Category B. Reproduction studies performed in mice and rats at doses up to 10 times the human dose revealed no evidence of impaired fertility or harm to the fetus due to cyclacillin. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, use this drug during pregnancy only if clearly needed.

NURSING MOTHERS: It is not known whether this drug is excreted in human milk. Because many drugs are, exercise caution when cyclacillin is given to a nursing woman.

Adverse Reactions Oral cyclacillin is generally well tolerated. As with other penicillins, untoward sensitivity reactions are likely, particularly in those who previously demonstrated penicillin hypersensitivity or with history of allergy, asthma, hay fever, or urticaria. Adverse reactions reported with cyclacillin: diarrhea (in approximately 1 out of 20 patients treated), nausea and vomiting (in approximately 1 in 50), and skin rash (in approximately 1 in 60). Isolated instances of headache, dizziness, abdominal pain, vaginitis, and urticaria have been reported. (See WARNINGS) Other less frequent adverse reactions which may occur and are reported with other penicillins are anemia, thrombocytopenia, thrombocytopenic purpura, leukopenia, neutropenia and eosinophilia. These reactions are usually reversible on discontinuation of therapy.

As with other semisynthetic penicillins, SGOT elevations have been reported.

As with antibiotic therapy generally, continue treatment at least 48 to 72 hours after patient becomes asymptomatic or until bacterial eradication is evidenced. In Group A beta-hemolytic streptococcal infections, at least 10 days' treatment is recommended to guard against risk of rheumatic fever or glomerulonephritis. In chronic urinary tract infection, frequent bacteriologic and clinical appraisal is necessary during therapy and possibly for several months after. Persistent infection may require treatment for several weeks.

Cyclacillin is not indicated in children under 2 months of age. Patients with Renal Failure Cyclacillin may be safely administered to patients with reduced renal function. Due to prolonged serum half-life, patients with various degrees of renal impairment may require change in dosage level (see DOSAGE AND ADMINISTRATION in package insert).

Dosage (Give in equally spaced doses)

INFECTION	ADULTS	CHILDREN*
Respiratory Tract		
Tonsillitis & Pharyngitis	250 mg q.i.d.	body weight < 20 kg (44 lbs) 125 mg q.i.d. body weight > 20 kg (44 lbs) 250 mg q.i.d.
Branchitis and Pneumonia		
Mild or Moderate Infections	250 mg q.i.d.	50 mg/kg/day q.i.d.
Chronic Infections	500 mg q.i.d.	100 mg/kg/day q.i.d.
Otitis Media	250 mg to 500 mg q.i.d.†	50 to 100 mg/kg/day†
Skin & Skin Structures	250 mg to 500 mg q.i.d.†	50 to 100 mg/kg/day†
Urinary Tract	500 mg q.i.d.	100 mg/kg/day

*Dosage should not result in a dose higher than that for adults.

†depending on severity

Commentary

AMA Interim, 1980

San Francisco

JOHN B. THOMISON, M.D.

Shortly after the AMA House of Delegates got going in its first full day of deliberations in San Francisco in December, President Robert Hunter announced that the remainder of the AMA Interim Meeting would have to proceed without him, and without Board Chairman Lowell Steen and EVP James Sammons as well. They were, he said, leaving immediately for a command appearance before President-Elect Ronald Reagan and his transition team to present their views on medical affairs in the United States. Since this was a first, even though the timing was unfortunate, under the circumstances the House could better afford their absence than their presence.

As it turned out, the meeting was a quiet one. The big news was the election, with the defeat of some of medicine's nemeses in the Senate providing hope that overregulation would recede and fair competition be reinstated. This encouraged the House to call for the repeal of PSRO and health planning legislation and an end to the unfair advantages taken by HMOs.

Some minor boat-rocking occurred in reference committee which threatened to unzip the tenuous union between the parents of the newly

found Council for Medical Affairs (CFMA), which was just formed to replace the old Coordinating Council for Medical Education (CCME). The argument erupted over the new *Essentials for Graduate Medical Education*, when the Resident Section objected to some of its provisions. They had not been represented at the final drafting, and because the residents had been denied due process, the Board, and subsequently the House, felt negotiations should be reopened. It was surprising to me that some of the provisions were accepted by anyone, as they were not good and did need reworking, but some made the point that it had taken six years to get this far and it was unlikely agreement would be reached in six months (the deadline was set as the 1981 Annual Meeting), and we badly needed to get on with it. The residents countered that they had worked under the old essentials for a long time, and a little more time wouldn't hurt. Negotiations are under way at this writing, and one hopes the distraction will not unglue the new union under which CME accreditation is now operating.

Well, so much for the big news. Let's go now through some of the specific items taken up by

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the House. As is always the case with these resumes, various observers will perceive the importance of individual items differently, and I can only give you my own perception of them. I report to you only items that were either passed by the House or filed for information, and occasionally items the House rejected. Since I do not tell you about all of the things the House referred to the Board for study, this report will be shorter than some because it seemed to me an inordinate number of the items considered by the House wound up in the lap of the Board. I will mention one, since it made headlines: as some of the disgruntled delegates put it, the "delegates refused to endorse ERA." What the House did was to refer to the Board for study a 44-page report by the Ad Hoc Committee on Women in Organized Medicine. As one of the female delegates commented, "at least we've got the issue on the floor and back to the Board. They know we are not going to keep quiet about it."

I will not dwell to any extent on matters of membership or financing of the Association, as these are discussed in some detail in the report of the Executive Vice President, which is printed elsewhere in this issue of the *Journal*. I urge your special attention to this extremely important item, which points out where we have come from and where it is we are trying to go as a profession, and what is necessary for the AMA to continue as our representative before the rest of the world. In the event you do not consider the AMA your representative before the rest of the world, please answer these questions: (1) Do you think you do not need a representative before the rest of the world? (2) What are you doing to insure that the AMA adequately represents you?

As we now have a new code of medical ethics, the Judicial Council is busy reviewing its interpretations, since the language and number of items of the 1957 and 1980 principles are different. The Council considers that given the breadth of the undertaking, their review process will not be concluded until sometime later this year.

Modern technology has created multiple ethical dilemmas, and medicine is involved in most of these in one way or another. These include such things as artificial insemination, altering genetic makeup of microorganisms and patents of the artificial mutants, fetal research,

amniocentesis, and genetic screening. At the Annual Meeting last July, the Board of Trustees informed the House that it had appointed a panel of expert scientific consultants to assist the Judicial Council in discussing and reaching conclusions on such bioethical issues, and the Judicial Council has commenced communication with them. The Judicial Council invites any member of the profession or related fields to bring such questions or issues to the Council's attention, and should you have concerns along these lines, you should make them known to the Council. The Council anticipates that an initial series of opinions and reports on bioethical issues will be developed and compared in the coming year.

Although AMA policy has always been steadfastly opposed to governmental regulation, the House this time was not content simply to reiterate existing policy in response to resolutions opposing such things as PSRO legislation, Public Law 93-641 (the Health Planning Act), and government subsidy of per capita medical care (HMOs). Report B of the Council on Medical Services, which reaffirmed current policy to continue the "PSRO Program as a professionally directed effort to insure that care provided to patients is of high quality and appropriate duration, and is rendered in an appropriate setting at a reasonable cost," the House added a significant clause: "to encourage the elimination of all government directed peer review programs, including PSRO."

In like manner, the House grouped a number of resolutions having to do with health planning and resources development and certificate of need under Substitute Resolution 66, which reads:

Resolved, That the American Medical Association support immediate cessation of funding for PL 93-641 and PL 96-79; and be it further

Resolved, That the AMA cause legislation to be introduced in the 97th Congress to repeal PL 93-641 and PL 96-79 and, with the support of the state medical associations, seek diligently to pass that legislation; and be it further

Resolved, That, until such time as PL 93-641 and PL 96-79 are repealed, HMOs should not be exempted from equal application of the laws; and be it further

Resolved, That, because there are differences in different sections of the country, wherever state and regional attitudes and directives pose specific problems in regard to planning, the medical profession should accept responsibility and assume a position of leadership; and be it further

Resolved, That the AMA develop principles for a

program of voluntary, locally-based health planning designed to address local needs with local resources as an alternative to PL 93-641 and PL 96-79.

Further, Substitute Resolution 22 called for the AMA to reaffirm its position "that approval of the concept of neutral public policy and fair market competition among all systems of health care delivery continue to be AMA policy, with the potential growth of HMOs being determined not by federal subsidy, preferential federal regulations, and federal advertising motion, but by the number of people who prefer this mode of delivery." Report A of the Council on Medical Service is a status report on HMOs. Since the present administration intends to significantly alter the manner in which HMOs function and are financed, if they are not abolished altogether except as they are privately funded, this subject is in a state of flux, and publication of Report A I feel would not be worthwhile.

Moving on to the matter of medical education and accreditation, the Board of Trustees in their Report Y reported the results of negotiations conducted during the past several months, along with the agreements that have been reached, regarding mechanisms for studying and accrediting medical education. The chief executive officers and top elected officials of the AMA, the American Board of Medical Specialties (ABMS), the American Hospital Association (AHA), the Association of American Medical Colleges (AAMC), the Council of Medical Specialty Societies (CMSS), the Association of Hospital Medical Education (AHME), and the Federation of State Medical Boards (FSMB) met on several occasions with a maximum degree of cooperation on the part of all participants. As a result of these meetings, a new discussion forum called the Council for Medical Affairs (CFMA) was established to replace the Coordinating Council on Medical Education (CCME). The bylaws call for the new Council to provide a forum to consider issues related to medical education and other matters of mutual concern. Each organization will be represented on the Council by its two top elected officials and its chief executive officer. Since the CFMA is not directly involved with the various accrediting mechanisms for medical education, it will be able to review issues from a broader perspective than was possible for the CCME.

To carry out the accreditation functions, the report proposes an Accreditation Council for

Graduate Medical Education (ACGME) and an Accreditation Council for Continuing Medical Education (ACCME). ACCME will replace the two multidisciplinary accrediting mechanisms, the AMA Council for Accreditation of Continuing Medical Education, and the Liaison Committee on Continuing Medical Education, which have been operative since July 1979. This organization will be sponsored by the parent organizations mentioned above, and its proposed bylaws, which were approved by the House, adequately addressed the concerns of the AMA that resulted in the AMA withdrawal from the LCCME in 1979. The CMSS was designated to provide staffing services. The House approved the draft bylaws, as well as a recommendation that the Board be allowed to continue negotiations to work out details of financing and staffing. Under this mechanism, the distressing problem of double accreditation appears to have been solved, and the new ACCME began functioning on January 1 of this year.

Two resolutions addressed the problem of the rapid development of foreign medical schools designed to attract large numbers of U.S. students. Many of these will graduate their first classes in 1981, and it is estimated that over 11,000 U.S. citizens are currently enrolled in these schools. There is considerable question as to the adequacy of the instruction in such schools, and it is in the public interest that their quality be established. The FSMB has established a National Commission for Evaluation of Foreign Medical Schools, but this commission has recognized the task as virtually impossible. Several states, faced with the prospect of large numbers of applicants for matching programs for residency training, have been under considerable political pressure to take matters into their own hands. Substitute Resolution 70 addresses this matter, and reads as follows:

Resolved, That the American Medical Association House of Delegates adopt the position that, based in the private sector, there be a uniform method to evaluate foreign medical schools; and be it further

Resolved, That the American Medical Association recommend that the standards used to determine adequacy of the program of a foreign medical school should be equivalent to the standards by which United States schools are evaluated; and be it further

Resolved, That the American Medical Association recommend that no individual accrediting or licensing jurisdiction acts independently in making judgments on the quality of education in foreign medical

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schools, but rather participates in the uniform evaluation mechanism; and be it further

Resolved, That the ultimate goal of these efforts be development of a mechanism providing for evaluation of the qualifications of graduates from newly created foreign medical schools.

In considering the matter of smoking, it is inevitable that no matter which way one turns, somebody's ox gets gored. Add to this the general disagreement over how much regulation is too little, just right, or too much, and you have a real sticky wicket. The usual number of resolutions and reports were generated addressing these matters; two reports and two resolutions were adopted, and one resolution was referred to the Board. Resolution 76 calls attention to the fact that the AMA has urged television networks to refuse advertisements using athletes to endorse tobacco products and has commended magazines which refused to accept tobacco product advertisements; it therefore would urge the 100 most widely circulated newspapers and the 100 most widely circulating magazines in the country that have not already done so to refuse to accept tobacco product advertisements. It further asks the AMA to continue to support efforts by physicians and the public to persuade those media that accept tobacco product advertising to refuse such advertising. Report C of the Board is a status report on the AMA multimedia antismoking campaign and its Report L is a response to Substitute Resolution 154 (A-80), which urges written correspondence by interested persons to newsmedia that accept tobacco product advertising urging them to refuse it.

A look at physician suicides was urged by Resolutions 49 and 50 (I-79) so as to establish a data repository and clearinghouse for information concerning physician suicides and to cooperate with the American Psychiatric Association in securing data on such suicides for purposes of anticipating suicide in suicide-prone individuals, at the same time determining factors which might lead to suicide. Assessment of available resources led the AMA to conclude this joint project would be feasible and desirable, but because of the number of unanswerable questions, proposed that it begin with a pilot project. This project is described in Report V of the Board of Trustees, which we will publish in a subsequent issue of the *Journal*.

Report B of the Council on Scientific Affairs is a report on marijuana in the 1980s. It urges expanded efforts by the medical profession to inform the public of the hazards of marijuana abuse, and urges additional research on possible therapeutic applications of marijuana. The report was adopted, and the Council was commended for the excellent report. The House also urged widespread dissemination of the report, and to that end, we will publish the report in a subsequent issue of the *Journal*.

The current rash of recent policy decisions made by federal regulatory agencies outlining new programs for identification of carcinogens prompted Report A of the Council on Scientific Affairs. News reports claiming that 80% to 90% of all cancers may be due to environmental factors, which has often been translated to mean occupational environment, seems absurd, and the Council reviewed the basis for the progress of federal carcinogen regulation initiative. Cancer is indeed a major national health problem, and there can be little doubt that environmental exposure does indeed account for certain cancers. Since there is therefore need for regulation of true carcinogens to which we may be exposed, the Council felt underlying premises and the proposed mechanisms for such regulation needed to be carefully considered and in some instances refuted or revised. Because this is a rather complete exposition of the situation as it presently exists, CSA Report A will be published in a subsequent issue of the *Journal*.

Although exercise testing has long provided a means to measure cardiovascular and physical fitness, recent data which have become available allowing comparison of coronary arteriography with the results of exercise testing have shown a disturbingly high prevalence of false-positive and false-negative tests. Since this has resulted in a challenge of the values of such testing, the Council requested expert consultants to consider the role of the exercise test in medical practice. These findings are summarized in CSA Report C, which we will publish in a subsequent issue of the *Journal*. The conclusions were that although it can help answer a number of questions about the severity, and hence the prognosis, of coronary artery disease (CAD), and can provide a measure of functional capacity, the exercise test probably has little indication in the routine screening of the healthy population as a case-finding device.

Maternal serum alpha-fetoprotein (AFP) de-

terminations have proved valuable in detection of open neural tube defects. When it was asked to examine the data, the Council on Scientific Affairs identified several questions regarding the appropriate use of the test. Its Report I examines the uses of the test, as well as the announced intent of the FDA to strictly regulate AFP testing. As the report is an in-depth study of all methods of intrauterine fetal testing, Report I will subsequently be published in the *Journal*.

The FDA came in for other criticism, specifically as to its Patient Package Insert (PPI) Program, and its lag time in approving or disapproving new drugs. PPI program regulations were finalized in the Sept. 12, 1980 *Federal Register* and the program was scheduled to begin within the next six months. This would require development and distribution of PPIs for prescription drugs. These inserts were drafted without the benefit of consultation with practicing physicians. The FDA was also criticized for its haste, which precluded prudent exploration of alternative forms of patient education such as counseling, drug compendia, or direct physician distribution of the information. The inserts themselves were criticized for being couched in language unintelligible to the average patients. It was felt that these inserts would pose serious threats to the patient-physician relationships as well as conflict between physicians and pharmacists, and would lead to confusion and lack of compliance with physician directives. The House therefore adopted Resolution 65, which resolved that the American Medical Association urge the FDA to place a moratorium and hold in abeyance any extension of the program for implementation of PPIs until an orderly, interdisciplinary, and collaborative educational program is initiated to evaluate the PPI concept.

Resolution 54, introduced by the American College of Nuclear Medicine, addressed special drug approval to the FDA, which is vested with authority to approve or disapprove drugs and agents for human use. The resolution states that some agents, both radioactive and nonradioactive, for specialty use such as treatment of cancer would require many years of testing to meet the criteria of this agency; since many of the agents now forbidden for manufacture in this country have shown great promise and results in foreign countries, and since investigative work by reputable organizations in the United States is readily considered by foreign governments, it would seem a reciprocal approach would be healthy and

desirable. It was therefore resolved "that the American Medical Association request the Food and Drug Administration to establish a special category drug/agent committee to accept and apply the investigative work of selective foreign governments and agencies to meet the criteria for approval or disapproval of an agent or drug."

The problem of maintenance of high-quality nutrition in the event of shortages was considered in CSA Report E. It discusses fortification and restoration, and the availability of formulated foods, as well as guidelines for all of these. This report will be published subsequently in the *Journal*.

Finally, the CSA considered the matter of organ donation and transplantation, calling for continued support of the campaign to make the public more aware of the need for donations. It also called for revision in the AMA's ethical position on organ donation and transplantation, and urged the Health Care Financing Administration to reestablish a registry of renal and cardiac transplantation. This Report D of the CSA will also be published subsequently in the *Journal*.

Briefly noted, the House of Delegates:

- Rejected a proposal to reinstate the Committee on the Medical Aspects of Sports.
- Referred to the Board a resolution asking the AMA to continue its jail care project and develop alternate funding sources.
- Referred to the Board a resolution asking that a seat in the House be granted to the American Medical Women's Association.
- Endorsed a Board recommendation to maintain current levels of size and quality of the AMA scientific journals in fiscal 1981.
- Approved an additional investment of up to \$5 million in AMACO, the Association's liability reinsurance facility.
- Called for continued use of the AMA public relations program to foster expanded coordination with state and county medical societies.
- Referred to the Board a suggestion that AMA consider forming an "AMA Institute for Medical Accident Prevention."
- Referred to the Board of Trustees for further study a resolution urging stronger and more enforceable safety standards for school buses, noting that driver error accounts for 90% of school transportation accidents.
- Supported the concept of integrating disabled people into the mainstream of active life, a goal of the United Nations International Year of

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Disabled Persons.

- Recommended that, when feasible, drug manufacturers imprint legibly on legend drugs in solid dosage form some mark identifying the drug.
- Recommended that nonphysicians who perform tests such as blood pressure or blood sugar measurements advise the patient to communicate test findings to a licensed physician.
- Urged all involved federal government organizations to voluntarily discontinue distribution of literature pertaining to medical radiation recordkeeping.
- Opposed legislation to increase public funding for programs to train physician's assistants and called for careful reevaluation of the need for public funding.
- Recognized the positive impact on the costs and quality of medical care of properly utilized and correctly supervised computerized tomographic scanners for both head and body and said that ready access to this technology should be assured to physicians and their patients.

• Adopted a resolution aimed at rectifying inequities in payment by third parties because of geographical distribution.

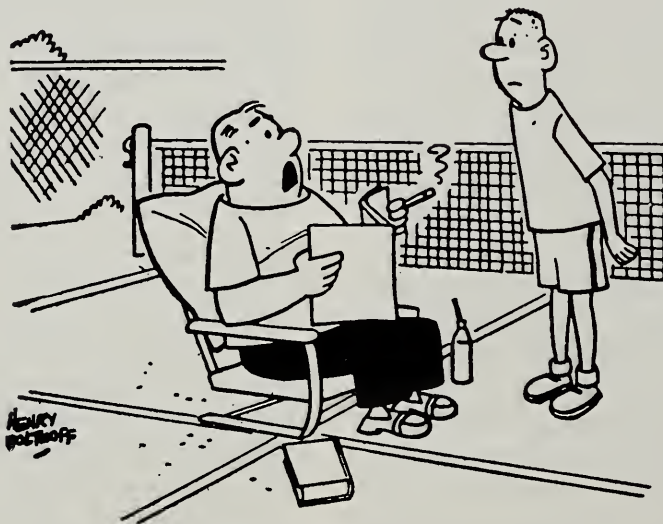
• Condemned television programs that sensationalize dangerous stunts.

A couple of months after this comes to you, it will all start over again — new resolutions, more reports, more discussion, in who knows what political climate. We hope it will be better. But whatever the climate, your Association will be looking after your interests.

"But," you say, "it's not my Association."

It is, whether or not you wish it to be — and a good thing, too. Whether or not you identify yourself with it, you are identified with it by others, and disclaimers to the contrary will get you nowhere.

That being so, shouldn't you get into it and help shape it the way you want it? If you are in already, shouldn't you work to shape it the way *you* want it? Although the hierarchy and staff pull a lot of weight, unlike most other medical — or even governmental — organizations, the House of Delegates has the last word. You *can* be heard. So why not speak up? 



"My doctor told me to spend three hours a week on the tennis court."

Report of the AMA Executive Vice President

AMA Interim Meeting, 1980

JAMES H. SAMMONS, M.D.
Executive Vice President
American Medical Association

To begin this overview of the major issues that now concern us, it is appropriate to point out that we have reached the end of an important and sharply defined period in the AMA's financial history.

Many of you will recall that at the time of the 1975 Annual Meeting the House of Delegates had to face up to some harsh matters of financial reality. The AMA was then confronted with major liabilities due the federal government. These had arisen from disputes over the interpretation of complex regulations. Current financial exigencies were then being met, thanks largely to a \$60 assessment upon the membership. There was, in addition, a need to build long-term reserves. To be in a better position to handle the liabilities, to establish contingency funds to finance anticipated legal challenges and simply to put the AMA on a sound operating basis, the Board recommended a sizable dues increase. The House showed its understanding of the problems by authorizing the present level of dues and by approving at the same time a five-year financial plan for the Association, calling for operating results that would permit the accumulation of substantial reserves.

The goals spelled out in that plan have been achieved and even passed. The Internal Revenue Service liabilities have been settled or paid through 1978. The Postal Service matter has been disposed of, the differences resolved by the payment of \$728,000. Simultaneously, reserves have risen to levels that surpass the goals set in the 1975 financial plan.

At the time those projections were drawn, we expected that it would be necessary to seek an increase in dues to become effective for the 1981 fiscal year. But, as reported to you last July, tighter controls and sounder fiscal management have made it possible to delay that request by a

year. That is another way of saying that the year just ending, FY 1980, will produce operating results that are more favorable than we thought they would be in 1975, or even at the beginning of this year.

Some comments about the estimated results for 1980 are in order. Revenues should be up about 7% over 1979, with a \$1-million increase in advertising revenue. Dues revenue is up as well; in fact, we should be ahead in every category of membership, with a growth of an estimated 2,250 in the number of regular members. But having said that, I should point out that these figures fall below our first-of-the-year target. We—and by that I mean the whole federation—have not yet been able to break out of the pattern of membership results in recent years: modest growth, but little headway in expanding our share of the total physician population.

On the expenditure side, the numbers, unfortunately, are also higher—by almost 10%. I call your attention to the 20% surge in publishing costs. Some of that is attributable to the production of an additional number of advertising pages, but most of it stems from inflation, from increases in the prices we pay for paper, ink, postage, and printing. Wages and salaries rose by about 7%, not because of any substantial increase in staff but because of the need to keep our levels of compensation competitive.

Anticipated operating results—the excess of operating revenues over operating expenditures—should comfortably exceed what was envisioned in the budgeting process at the beginning of the year. However, because of the postal matter mentioned above and a further resolution of disputed tax payments, we shall have to reduce that \$7.5-million operating excess by about

\$3.3 million. This diminishes the contribution to reserves we had anticipated making this year, reduces the amount of money available for investment purposes next year, and dictates additional adjustments in an already tight 1981 budget.

I want to emphasize to you that we budget for taxes each year and that we pay taxes each year. But IRS regulations are open to interpretation, giving rise to disputes over the final amount due every year. This is reasonable, standard operating procedure in the corporate world; this is not the sort of practice that created the problems we had to deal with in 1975.

The net of it all is that we still expect to be able to contribute about \$4.2 million to reserves this year, bringing the Association equity—our net worth, really—to about \$67 million. Viewed against the settlement of large, preexisting liabilities and against totally unforeseen, totally unprecedented inflation rates, this is a dramatic accomplishment. From year-end 1974 to year-end 1980, we shall have increased Association equity more than fivefold.

Before leaving this discussion of projected 1980 financial results, I would call your attention to the change in real estate investments, from just under \$17 million in 1979 to an estimated \$22.5 million in the current year. The difference represents the payment of construction costs of the new building in Washington, D.C., which is proceeding on schedule. Such payments have the effect of reducing the amount of money available for investment over the short term. In time, of course, the building will generate a substantial cash flow, in terms of rental income and in rent saved to house our Washington office. While on this subject, I assure you that we are also looking closely at the nine acres of real estate we own in Chicago, all in the headquarters area, to examine ways in which to use this considerable asset to generate higher revenues. As I have said before, one of our long-range management goals is to develop revenue sources other than dues to give the Association a more diversified income base and to hold future dues increases to a minimum. That thinking underlies the continuing development of foreign language editions of *JAMA*, the latest being an edition for the French speaking part of Switzerland, and the start of the consumer book program, the first being a handbook on first aid, now on sale.

Looking into the financial future and taking a

broad view, we encounter two matters of unwelcome and inescapable fact. The first is that we cannot realistically expect any immediate upturn in revenues. Some things can be done, of course. We plan to raise the advertising rates for our publications next year; we shall also have more favorable agreements for some of our accreditation programs. But these do not add up to anything that will have a dramatic impact, and, while we are placing a high priority on membership expansion, we cannot count on a sharp increase from that quarter either. Dues revenue is our largest single source of income, 56% of the total. The second fact is that we certainly can count on a rise in costs. No matter how you hope it may be otherwise, realism tells you to anticipate further inflation. On the advice of our own financial consultants and other sources, we expect that our expenses for 1981 will rise by \$6 million or \$7 million. Let me emphasize that this increase does not finance any increase in the level of activities or services; it anticipates only increases in prices. We plan to operate in such a way next year that we shall generate an excess of revenues over expenses. But the cushion will be so small that 1981 will, in overall effect, be a break-even year.

Given the reserves that we have accumulated, that is not a problem. Where the trouble comes is in the year after that, in 1982. If we plan realistically, we again have to think in terms of flat revenues and inflated costs. Without additional revenues, it is hard to see anything but a loss for the 1982 year of \$6 million or \$7 million. Barring any great change in the economy or the inflation rate, we then have three choices before us for the AMA in 1982: (1) a deficit year, (2) sharply curtailed programs, (3) an increase in dues. Having experienced the agony of 1974 and 1975, I doubt that any one of us wants to elect for option number one.

That means a choice between option two and option three, or some combination of them, will have to be made at our meeting this June. Recommendations for your consideration will be submitted at that time; no action on your part is expected now. But I hope you will start thinking about the choices before you.

It is hard to say just what is an equitable level of dues for a professional association. So far as I know, no standards or formulas of wide acceptability exist. There is no historical equivalent, nothing even faintly resembling the tithe.

Before making judgments as to dues levels,

we can develop a better perspective by recognizing two factors. The first is that dues for the AMA have to be considered along with dues to county and state societies as well. The size of the whole package varies county by county, state by state. But taken all together, it is a sizable amount of money—\$600 to \$800 per year. The second factor is the tax deductibility of the package. Professional society dues, as you well know, may be subtracted from gross income on tax returns. Given the levels of average physician income and the tax rates applicable, the real, out-of-pocket cost for many established practitioners is only 50% of the total. Dues undoubtedly create a strain for the younger physician, just starting out, or for the salaried, teaching physician, or for the older practitioner who is tapering off. Nevertheless, for many physicians—possibly for most physicians—the price for full membership in organized medicine presents a less formidable barrier than frequently described.

It is tempting to look for comparisons. Does the physician pay the same proportion of income to his professional societies as the lawyer? Adjusted for earnings, how do AMA dues compare with those paid by a union member? The exercise is futile, for different organizations offer different benefits and services. What is more, the needs and goals of organizations vary; the priorities are different. Physicians recognize challenges that other professionals do not, and they care more strongly about some of their professional obligations. I doubt, for example, that any other profession concerns itself to the extent we do with the standards of professional training. Consequently, as we start forming judgments as to the proper level of dues, I suggest we forget considerations of price—which is where comparisons lead you—and concentrate instead on considerations of value. The questions we should be asking ourselves are questions like these:

- What is it worth to preserve medicine as a profession, as opposed to letting it become a trade, an occupation, a business?
- What is it worth to maintain a broad federation of the major elements within medicine, with a focal point around which they can all unite?
- What is it worth to have a representative forum where the profession can raise the important issues, argue their merits and then arrive at a consensus?
- What is it worth to have the profession, rather than the government, define and maintain

the standards of medical training and medical care?

- What is it worth to have an organization sufficiently financed and sufficiently determined to challenge the power of a federal regulatory agency all the way up the line? In pursuing the appeal process in the FTC case, we are insisting on the profession's right to set ethical standards.

- What is it worth to have an organization to do the many things needed to acquire a strong voice in Washington?

- What is it worth—specifically—not to have a Kennedy-type health insurance bill? What is it worth to be able—over time—to turn the Committee for National Health Insurance, which began backing Senator Kennedy's proposal with such fervor 11 years ago, into an all but extinct volcano?

- What is it worth, in the final analysis, to have an active, strong, vibrant profession? What is it worth to have an active, strong vibrant American Medical Association that is central to that profession and positioned to translate its professional convictions into practical actions?

Those are the questions we should be asking. And once we have asked them and used them to concentrate our minds on values, then I think the question of costs will fall into a better perspective.

As we look toward 1981, the horizon appears brighter in some ways than it has in many years. Next month we shall see the inauguration of Ronald Reagan as our 40th President, the installation of the first Republican Senate in 26 years and a more conservatively inclined House of Representatives. All of us are buoyed by an election which clearly signals a shift in the political-social-economic philosophy that has prevailed for a long time. But how sharp the turn to the right will be, no one can now safely predict. The danger for us lies in thinking that our recent battles are over—that now, at last, we can relax, drop our guard.

That would be a mistake. Recalling what President-Elect Reagan said in his campaign, it would require a quirk in our mental process to expect a White House initiative for a sweeping national health insurance bill. Similarly, it would be a surprise to see the new administration push for hospital cost caps of the sort President Carter advocated. Yet it would be folly for us to expect no action to correct some of the chronic problems, such as costs, or meet some of the major

needs, such as coverage for those now uninsured. We have to remember, too, that the new administration is committed to reducing the size and cost of the federal government. Anyone so committed is going to look right away at the \$60-billion annual cost for Medicare and Medicaid—and the annual growth rate in their cost: 15%. What I think we must expect is a mounting effort to hold federal health expenditures at or near present levels. That puts the pressure on priorities. Which programs remain intact? Which are cut? Which are dropped? In this process, I think the AMA must show a greater degree of initiative than it has been accustomed to showing in the past. Political decisions to cut costs will inevitably require medical decisions as to where they should be made. We have a public responsibility for those decisions, and we should welcome it, difficult as it will be for us to arrive at some of the recommendations.

We may also expect initiatives from the Congress. The so-called procompetition bills, advanced as a means of lowering costs, have great philosophical appeal among those who have just won office. I would remind you too that the new chairman of the Senate Finance Committee, Senator Dole, and the new ranking Democrat, Senator Long, have both pushed for catastrophic health insurance bills in the past. We can expect changes to be recommended in HMO legislation, in HSAs, PSROs and the National Institutes of Health. I acknowledge that health scarcely played a part in the recent campaign, but the issues, nonetheless, have to be dealt with. They have not gone away. They will not be quiescent, and we must not be complacent.

What actually lies ahead of us, more than anything else, is a period of opportunity. So often in the past we have had to confine our efforts to negative positions. We have had to go to the Hill to stop this or sidetrack that. So many times our major effort has been to counteract a threat of one kind or another. But many of the old threats are gone. In their place is a new climate in which initiatives by us should be more welcome. We must seize the opportunity we now have to make a more positive, more constructive contribution to the legislative process. The philosophical environment has shifted in our favor, and, while conservative legislation is never easy, it is a promising time to work for private solutions to our public problems.

To capitalize on these opportunities, to take

fullest advantage of them, I want to suggest that we take a hard look at the semantics and rhetoric we employ when we state our legislative positions. Bear in mind that a piece of legislation seldom represents the adoption of one single proposal. It results instead from the mingling of several viewpoints, from give and take, from consensus. Woodrow Wilson once referred to "the dance of legislation," and Bismarck said that a person with a taste for legislation, or for sausage, should never watch the creation of either. Someone who would participate effectively in the legislative process must have running room, the leeway to trade, to negotiate. Otherwise he is ineffective, for unless his position is immediately accepted, his participation in the process ends an instant after it begins.

A legislative position that relies on words like "never" or "always" or "only" is a weak position because it fits the person who has to present it with a straitjacket. It gives him only a single card to play. A more effective position states the overall goal in clear language, leaving no doubt as to intent. But it should stop there. During World War II Churchill and Roosevelt decided that there should be a cross-channel invasion of Europe, and they decided, after a time, that it should take place in 1944. But it was left to General Eisenhower to decide where exactly it would be, how the troops would be deployed and when precisely it would take place. The distinction should not be lost on us. There is a difference between strategy and tactics. When those charged with drawing up a legislative position state it in such a way as to dictate tactics, they defeat their purposes. In the world of *Realpolitik* very little gets decided *exactly* the way we want it decided. Or the way the Democratic party wants it decided. Or the way the Republican party wants it decided. As a matter of fact, I doubt that many things will be decided exactly the way President Reagan wants them decided. Politics just does not work that way. Legislation grows out of negotiation, compromise. Let us acknowledge that. And let us acknowledge that our success in Washington over the next four years will depend heavily on the care and sophistication we show in developing our legislative positions. Let us by all means take clear positions with respect to legislative and regulatory objectives. But in doing so, let us also be sure we do not hobble the efforts of those who must do the difficult work to achieve those objectives.

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Council on Scientific Affairs Report B

Physician Supervised Exercise Programs in Rehabilitation of Patients With Coronary Heart Disease

(Appendix J)

(This report is not intended to serve as a standard of medical care: standards of medical care which are determined locally and are constantly subject to change are established on the basis of all the several facts of the individual case.)

The increasing interest in physical fitness and awareness of health maintenance on the part of many middle-aged Americans has led to the development of special programs and facilities to meet this demand. The application of these same programs in the rehabilitation of patients with coronary heart disease, while cautious and tentative at first, has become an important development in medical care that has had increasing impact upon the management of such patients. The recent scope of the clinical investigations of exercise rehabilitation and the magnitude of the applications which some workers have proposed have led the Council on Scientific Affairs to request three of its advisory panels of experts to report on the state of the art of exercise rehabilitation in this specific form of heart disease.

This intensification of rehabilitation efforts that utilizes habitual physical exercise as a therapeutic mode, for patients suffering from or at risk of coronary atherosclerosis, has fostered a physician role as a consultant in these efforts. Such a consultant, a physician who has a special competence in exercise physiology, provides an evaluation of the patient's functional status. The consultant also establishes the patient's suitability for participation in an exercise program, provides a detailed individualized prescription of the exercise program and monitors his or her progress. Physician direction and supervision of such programs is critical to the proper assimilation of these services into the health care system.

The physician-consultant in these special programs and facilities supplements the patient's primary care physician. The self-referred individual should be urged to utilize the services of his own primary care physician or to find one. The patient should also be advised that the tests performed in such a facility do not replace the continuing care of his or her physician.

Cardiac rehabilitation should include much more than an exercise program.¹⁻⁵ Patients should be educated regarding their disease and in the possible methods of limiting its progression including cessation of cigarette smoking, control of high blood pressure, and modifications of diet. However, it is the exercise program which frequently serves as the main focus of the rehabilitation program and sets it apart from a simple counseling service. The exercise program also may facilitate and reinforce other changes in lifestyle.

The potential clinical benefits of a carefully prescribed and supervised exercise program in coronary heart disease patients include:

- psychological improvements in self-image and reversal of mental depression;
- increased maximal oxygen uptake (aerobic capacity), associated with (a) enhanced oxygen extraction by the trained muscle groups; (b) lowering of the

heart rate and systolic blood pressure, both at rest and for any given submaximal workload; (c) faster return of post-exercise hemodynamic parameters towards normal.

Other observed changes, which are of less certain physiological significance but which are presumed to have clinical benefit, include:

- lowering of serum catecholamines;
- reduction of adipose tissue and increase in percent of lean body mass;
- favorable alterations in concentrations of serum insulin, glucagon, triglycerides, and possibly coagulation factors;
- increased ratio of serum high density to low density lipoproteins.

Morphological and functional changes in the heart, some of which may be beneficial, have been demonstrated after exercise training in young animals, but not in older animals. These include myocardial hypertrophy, improved myocardial contraction, increased coronary arterial lumen and an increased capillary to myocardial fibril ratio. Although similar morphological changes in young humans have been suggested, repeated efforts to document improved coronary artery blood flow or increased collateral circulation after exercise training by pre- and post-training angiograms in patients have been unsuccessful.

Although there is some suggestive evidence in the preliminary reports of the National Exercise Heart Disease Program, to date there have been no properly designed studies that answer the important question whether supervised exercise training modifies morbidity and/or mortality rates in coronary heart disease. Nevertheless, it has been well established that coronary heart disease patients with classical angina pectoris can frequently tolerate higher workloads after training without the occurrence of symptoms at the same level of activity that previously induced symptoms.

Exercise programs for coronary heart disease patients can be conducted safely if properly supervised.⁶ The incidence of ventricular fibrillation requiring cardiopulmonary resuscitation has varied from 1 in 9,000 to 1 in 32,000 man hours of exercise. Such events are, with rare exception, reversible with complete recovery.

The principles of exercise training apply no less to patients with heart disease than to healthy individuals. There are several guidelines that are available to anyone interested in the establishment and pursuit of such a rehabilitative effort.¹⁻⁵ However, it is important that four factors are considered in the prescription of an exercise program:

1. Type of Exercise — exercise should be aerobic and use large muscle groups.
2. Frequency — the exercise program should be performed at least three days each week.
3. Duration — an exercise session should last 30 to 45 minutes and should be accompanied by an appropriate warm-up and cool-down period.
4. Intensity — the heart patient should train at 50% to 75% of his maximal oxygen uptake; an adequate estimate of metabolic cost can be the heart rate response in most patients. Less intense periods of exercise, while possibly of benefit, are less likely to produce an increase in maximal oxygen consumption or training effect. In general, cardiac patients should have a target that also takes into consideration symptoms and any significant ECG abnormalities.

Patient Selection

Traditionally the patient recovering from myocardial infarction, cardiac surgery or who has angina pectoris was counseled to increase his physical activity in small steps over a period of a few weeks to a few months, limiting his progression according to such symptoms as chest pain, dyspnea, palpitation, or fatigue. This may still suffice in patients who, because of the severity of their disease, their age,

or level of physical competence, cannot anticipate more than a sedentary existence after full recovery. However, in the patient who can anticipate a return to reasonable physical activity and pursuit of an active career, a formal exercise testing and training program will permit the selection of safe levels of activity and a more rapid recovery. Such a program can thus be recommended in those patients who are properly motivated and have none of the following exclusions.

Contraindications for participation in exercise programs are similar to those for exercise testing. They include certain cardiac complications:

- unstable angina pectoris;
- severe ventricular dysfunction manifested by a drop in systolic blood pressure and/or limited cardiac output in response to exercise, or severe dyspnea at low work loads;
- active cardiomyopathy or myocarditis in the previous year;
- uncontrolled hypertension;
- complex dysrhythmias;
- second and third degree AV block;
- uncontrolled atrial fibrillation;
- significant cardiomegaly;
- hemodynamically significant valvular or congenital heart disease;

as well as significant noncardiac illnesses such as orthopedic, pulmonary, gastrointestinal, and other systemic diseases, particularly:

- recent pulmonary embolism;
- anemia;
- uncontrolled metabolic diseases (e.g., diabetes mellitus, uremia, thyrotoxicosis); and
- transient febrile illnesses.

Exercise Programs

The In-Hospital Program begins before discharge from the hospital. The patient should be examined for evidence of any of the above exclusions that would contraindicate higher exercise intensity after leaving the hospital. Informal testing, such as walking in a hospital corridor, can be monitored at levels of exercise equal to or slightly exceeding those to be followed outside the hospital. In addition to symptoms and effects on pulse and blood pressure, electrocardiographic (ECG) abnormalities and signs of cardiac dysfunction (such as new murmurs, S-3 or S-4 gallops, arrhythmia, excessive dyspnea) can be sought during or immediately after such exercising. The development of any significant finding indicates that the intensity of exercise must be reduced.

Submaximal exercise testing of selected patients early after acute myocardial infarction has been shown to be safe once the convalescent patient is ambulatory.⁷ (Such exercise studies require an increase of 20 to 30 beats per minute in pulse rate over the resting rate, or an increase of up to 110 to 120 beats per minute, lower if the patient is receiving beta blocking agents.) It may be used to detect the threshold for adverse symptoms or signs and to test the safety of the decision to discharge the hospitalized patient to home care. It can be repeated easily in order to monitor the rate of improvement during convalescence. There is increasing evidence that it may also provide valuable prognostic information: in subjects who have neither ST changes nor complex ventricular ectopic activity with exercise, there are fewer cardiac events over a five-year follow-up period than in those who have one or both.⁸

Patients with congestive heart failure, uncompensated arrhythmias, orthopedic complications, or marked debility are not suitable candidates for even low-level testing. Continued anginal discomfort and/or conduction disturbances also need to be considered relative contraindications.

Therapeutic Outpatient (Post-Hospital Discharge) Program. Following progressive low-level activity in the hospital and return to home, the myocardial infarction patient may be entered into a prescribed and supervised exercise treatment program as early as three weeks after infarction, at his or her physician's discretion.¹⁻⁵ Generally, such a program consists of 30 to 45 minutes of supervised exercise on three nonconsecutive days each week. The underlying principles of conditioning apply equally to normal and abnormal subjects.

The time required for optimal physical conditioning of cardiac patients may be as long as one or two years. The need for supervision, with perhaps individual monitoring, is greatest during the initial three to six months after myocardial infarction, since the risk of exercise-induced acute coronary events is greater. Programs for these high-risk candidates are also designated as "therapeutic programs."

Maintenance Outpatient Program. Following the therapeutic program, the patient is encouraged to maintain the level of training achieved in the therapeutic program. When appropriate exit criteria have been met, the patient may proceed to an individually prescribed supervised or nonsupervised maintenance program.

Exercise testing, and perhaps other diagnostic procedures such as ambulatory monitoring, should be performed prior to and at intervals during the conditioning program in order to assess the response to the exercise stimulus. Exercise testing without a heart rate limit is an important requisite for the establishment of an adequate exercise prescription. Such testing may also be useful in the evaluation of cardiac therapy as well as for the assessment of patients with suspected or documented coronary artery disease. After the initial three to six months, extension of the program for three months or more at a time may be justified by the patient's failure to respond because of slow progress in training, occupational interruptions, intercurrent illness, trauma, or progression of the underlying disease. When exit criteria have been met, the patient may be referred to a maintenance program.

Exit criteria for terminating the therapeutic outpatient exercise treatment and rehabilitation program have not been firmly established. A difficult problem is created by the doctor's or patient's reluctance to continue a maintenance exercise program without medical supervision. There are no data yet which establish the most desirable duration of an exercise program for myocardial infarction survivors. The progression to a maintenance program from a therapeutic outpatient program is decided on the basis of many factors including (1) safe functional performance of an acceptable level of exercise; (2) a full understanding of the principles of health; and (3) evaluation by the physician. It is common practice to discharge the patient from the supervised exercise program if he or she has achieved safe attainment (without ischemia or dysrhythmias) or peak functional performance capacity above seven or eight METS. (A MET is defined as the individual's energy expenditure at rest, equivalent to approximately 3.5 ml O₂/kg body weight/min.)

Experience has indicated that less than 25% of the coronary heart disease patients show minimal or no improvement despite faithful adherence to a prescribed exercise program. Further studies including radionuclide angiography or coronary arteriography may be clinically indicated and may suggest further medical or surgical treatment. However, there are many patients in this category for whom lesser levels of physical activity may yet be beneficial.

Discussion

It is apparent that much clinical investigation remains to be done before the role of exercise-centered rehabilitation programs in the management of coronary heart disease can be delineated. There has been no study that shows the superiority of exercise rehabilitation over a less closely supervised home program. Many of the benefits of such a program are subjective and difficult to measure with any precision. Ultimately, justification of expenditures for such programs should be based on

demonstrated savings in mortality, morbidity, hospital days, or incidence of recurrences.

The basis for selection of patients may be made more precise by focusing on those patients most likely to benefit from such a program. The number of patients with coronary disease who are either unsuitable for an exercise program or are poorly motivated to continue it for as long as six months needs to be defined and may be considerable. Of the remainder, the percentage who will undoubtedly benefit, the percentage who will probably progress as well without such a program, and the group who may have only marginal benefits also need to be defined. A better definition of those patients for whom an exercise program makes the difference between rehabilitation with return to work and disability retirement still is needed.

Conclusion

In spite of the above difficulties there is general agreement among a large group of AMA consultants on the following points:

1. Exercise training can improve the objective and subjective rehabilitation of some patients with coronary heart disease and result in increased functional capacity.
2. Physician direction and supervision of exercise programs is critical to the proper assimilation of these services into the health care system.
3. Exercise testing is important for prescribing and then monitoring exercise rehabilitation programs in such patients, and may provide prognostic information. Serial testing may help to individualize the length of the exercise program.
4. While rehabilitation programs appear to provide many subjective benefits to the cardiac patient, they have not yet been shown to improve survival.
5. Cardiac rehabilitation should be considered one of the treatments for coronary heart disease complementary to drug therapy or surgery.
6. Further studies that examine the long-term benefit of the different types of exercise programs are indicated.

REFERENCES

1. Kattus AA, Brock LL, Bruce RA, et al: *Exercise Testing and Training of Individuals with Heart Disease or at High Risk for Its Development. A Handbook for Physicians*. New York, The Committee on Exercise, American Heart Association, 1975.
2. Kattus AA, Brock LL, Bruce RA, et al: *Exercise Testing and Training of Apparently Healthy Individuals. A Handbook for Physicians*. New York, The Committee on Exercise, American Heart Association, 1972.
3. Naughton JP, Hellerstein HK (eds): *Exercise Testing and Training in Coronary Heart Disease*. New York, Academic Press, 1973.
4. Erb B, Fletcher GF, Sheffield TL: Standards for exercise treatment programs. *Circulation* 59:1084A, 1979.
5. Wilson PK, Wingo ER, Edgett JW, et al: *Policies and Procedures of a Cardiac Rehabilitation Program—Immediate to Long Term Care*. Philadelphia, Lea & Febiger, 1978.
6. Haskell W: Cardiovascular complications during exercise of cardiac patients. *Circulation* 57:920, 1978.
7. Wenger NK: Rehabilitation after myocardial infarction. *JAMA* 242:2879, 1979.
8. Sami M, Kraemer H, De Busk R: Prognostic significance of serial exercise testing following myocardial infarction. *Circulation* 60:1238, 1979.

Council on Scientific Affairs Report C

Medical Care for Indigent and Culturally Displaced Obstetrical Patients and Their Newborns

(Appendix K)

High-quality obstetrical care from early in pregnancy through the six weeks postpartum period has long been a tenet of Western medicine. Recent statistics show that about 75% of the approximately 3.5 million women giving birth each year in the United States begin prenatal care within the first three months of pregnancy.¹ These women have made a good start at achieving a healthy outcome of their pregnancy. Unfortunately, for a number of reasons, about one fourth of new mothers do not have this kind of advantage, and 1% to 2% of new mothers give birth with *no* prenatal care.¹ Deterrents and obstacles to receiving high-quality obstetrical care may be (I) Situational or Economic; (II) Attitudinal.

I. Situational or Economic Deterrents:

- insufficient funds for public or private services and/or transportation to such services;
- ineligibility for public services;
- language difficulties; and
- inefficient or inadequate services.

II. Attitudinal Deterrents:

- fear of deportation, physical examination, or tests;
- fear of loss of privacy;
- fear of parental reaction;
- fear that physicians and nurses are unfriendly or disinterested; and
- cultural traditions that do not include medical care.

Inadequate public services for obstetrical patients are found in both urban and rural settings. In some areas, very good antepartum and family planning services are utilized, but there are no facilities for labor, delivery or management of high-risk mothers and babies. Elsewhere, services are available but underutilized. In many places, no services are available. Hundreds of thousands of others deliver at home under unsafe circumstances. Others deliver in hospitals inadequately equipped or staffed to deal with complications that are anticipated or encountered.

Useful guidelines for providing prenatal and perinatal services are available and have improved the level of care in many populations.^{2,3} Unfortunately, deterrents, such as those listed above, block the most effective use of these guidelines for many patients.

The human and economic costs of inadequate care are great. The reported maternal death rate has improved from 24.5 per 100,000 in 1968, to 11.2 per 100,000 in 1977.⁴ This means that 390 maternal deaths are reported annually; however, the true incidence is probably twice this number. About half of all maternal deaths may be preventable under optimal conditions. Chronic maternal illness that is not adequately treated may result in much unnecessary pain and suffering and in shortened lives of impaired quality.

Even larger penalties are inflicted on the fetus. Where care is poor or totally

lacking, low birth weight and its sequelae are more frequent and more severe.⁵ With proper care, deaths of live born infants weighing between 1,000-1,500 gm have been continually reduced, and in 1977 were 10% to 15%.⁶ Long-term physical and mental disability in surviving low birth weight infants can be very frequent. It has been estimated that, as late as 1966, 65% of all surviving infants of less than 1,500 gm at birth proved abnormal at follow-up.⁷ This figure is improving, and, with good care, can be below 15%.

Good care is costly, but not as expensive as the ill effects of poor or no care. Good antepartum and intrapartum care produce fewer babies requiring expensive nursery services. High-quality nursery care for those who need it often prevents long-term care of handicapped children and adults. A hundred dollars spent in antepartum services may prevent thousands of dollars in early hospital charges and tens of thousands in lifetime care. Most assuredly, it is in the best interest of individuals and of society for human birth to be in an environment that assures optimal health and comfort. It has been estimated that more than seven out of ten "at risk" medical complications can be identified at an early prenatal visit. Other reports show that about 60% of all problem babies can be identified during the antepartum period. The profession has the responsibility and opportunity to facilitate this process.

To deal with these problems, the Committee on Maternal, Adolescent, and Child Health of the Council on Scientific Affairs recommends that the American Medical Association:

1. Reaffirm its long-standing position regarding the major importance of high-quality obstetrical and newborn care by qualified obstetricians, family physicians and pediatricians, and the need to make such care available to all women and newborns in the United States.
2. Advise the executive and legislative branches of government to halt the increasing fragmentation of federal programs dealing with maternal and child health care services and to place all the current programs together in a single office with budgetary authority.
3. Urge the states and the federal government to fund Medicaid and other public programs sufficiently well to guarantee equal access to adequate care for the needs of all pregnant women and their children.
4. Educate the public to the long-term benefit of antepartum care and hospital birth, as well as the hazards of inadequate care.
5. Continue discussion of means for improving maternal and child health services for the medically indigent and the culturally displaced.

REFERENCES

1. Monthly Vital Statistics Report. Final Natality Statistics, 1977. National Center for Health Statistics, DHEW Publication No. 79-1120, vol 27, no 11 (suppl), Feb 5, 1979.
2. Toward Improving the Outcome of Pregnancy, developed by the Joint Committee on Perinatal Health Comprised of the American Academy of Family Physicians, American Academy of Pediatrics, American College of Obstetricians and Gynecologists, and American Medical Association. Available from the March of Dimes Birth Defects Foundation, White Plains, NY, 1977.
3. Ambulatory Maternal Health Care and Family Planning Services. Washington, DC, American Public Health Association, 1978.
4. Monthly Vital Statistics Report. Annual Summary for the United States, 1978. DHEW Publication No. (PHS) 79-1120, vol 27, no 13, Aug 13, 1979.
5. Infant Death: An Analysis by Maternal Risk and Health Care. Washington, DC, Institute of Medicine, National Academy of Sciences, 1973.
6. Thompson TR, Reynolds JW: The result of intensive care therapy for neonates: I. Overall neonatal mortality rates; II. Neonatal mortality rates and long-term prognosis for low birth weight neonates. *J Perinat Med* 5:57-99, 1977.
7. Lubchenco LO, Delivoria-Papadopoulos M, Searls D: Long-term follow-up studies of prematurely born infants: II. Influence of birth weight and gestational age on sequelae. *J Pediatr* 80:509-512, 1972.

Council on Scientific Affairs Report D

Infant Nutrition

(Appendix L)

Past House Action: I-78:193; A-79:46-47.

Resolution 111, "Infant Nutrition," was referred to the Board of Trustees for further study at the 1978 Interim Meeting. Report M of the Board of Trustees, responding to Resolution 111 at the 1979 Annual Meeting, was referred back to the Board of Trustees and then to the Council on Scientific Affairs for further study.

Resolution 111 (I-78) addressed the problems of infant feeding in many areas of the developing world, advocated breast-feeding of infants and condemned the commercial practices of companies producing infant formula. It resolved:

1. that the American Medical Association promote the education of the public as to the scientific evidence for the superiority of breast-feeding over formula feeding;
2. that the American Medical Association condemn the promotion of formula sales directed at areas where it is clearly inappropriate and results in disease and death;
3. that the American Medical Association express its concern in writing to all U.S. and international companies involved in the production of infant formula.

The Council on Scientific Affairs has reviewed the substantive scientific material pertaining to the use of infant formula. In addition, it has taken cognizance of the context within which the issue of the use of these products has been raised. While the Council does not consider it to be within its purview to comment on what specific commercial practices have been used in the marketing of infant formula and to what extent they have been employed, it does note that any practice that encourages the use of infant formula in a fashion that contradicts the scientifically based principles outlined in this report should be considered as inappropriate.

With regard to the matter of infant nutrition in developing nations, the position of the Council is that, as in other instances, attention should be directed to the health and nourishment of the pregnant female, preparing her for delivery and subsequent nursing of a healthy, full-term infant. Two documents previously adopted by the House of Delegates describe how this is best achieved. Council on Scientific Affairs Report D (A-79), "AMA Concepts in Nutrition and Health," states in part that, "Full-term, newborn infants should be breast fed, unless there are specific, contraindications or breast-feeding is unsuccessful. The breast-fed infant has health advantages that are not shared by infants who are formula fed, even though modern commercial formulas are skillfully designed to meet nutritional needs." The preference for breast-feeding is especially important under primitive conditions where food, water, and the environment may be quite unsanitary. However, some appropriate means must be made available to feed the child who is unable to subsist on mother's milk. Similarly, appropriate supplemental foods must be available for the child who receives inadequate milk or whose mother must terminate nursing prema-

turely. Problems of considerable magnitude may also arise during the period of weaning unless adequate nutritious, sanitary transitional foods are available for the infant. Resolution 44 (I-78) expresses the endorsement by the American Medical Association of the report by the American Academy of Pediatrics (AAP) and the Canadian Paediatric Society entitled, "Breast-Feeding, A Commentary in Celebration of the International Year of the Child, 1979."

The WHO and the UNICEF sponsored a meeting at Geneva on Oct. 9-12, 1979 on "Infant and Young Child Feeding." Representatives from the infant formula and packaged infant food companies, as well as public health officials from many nations, and members of the various coalitions participated in this meeting. As a consequence, a final "Statement on Infant and Young Child Feeding" was prepared and adopted, and a series of recommendations were made that encouraged urgent action by governments, international agencies, nongovernmental organizations, the infant food industry, and health and development workers to promote the health and nutrition of infants and young children. Both the statement and the recommendations included many noncontroversial pronouncements concerning the need for adequate nutrition of both mother and child, the desirability of breast-feeding, the preference of human milk over other animals' milk and milk products, the need for adequate nutrition education in the use of infant formula and weaning foods, as well as the development of occupational and social practices that will encourage mothers to pursue breast-feeding for four to six months and to maintain close contact with their babies even after they return to employment.

Attention is given in the recommendations to the development of guidelines which will ensure maximal effectiveness of educational and informational activities concerning weaning and subsequent nutrition of the child. It was suggested that governments should provide adequate nutrition training to medical students, nursing students, and other primary health care workers including midwives, school teachers, rural extension workers, and others. Both parents should be taught to appreciate the significance of monitoring an infant's growth and development. They should also be educated to the foods that are locally available and suitable for weaning. It was recommended finally that the present state of education and training in this area be reviewed as soon as possible and monitored thereafter by the collaborative efforts of UNICEF, WHO, FAO, UNESCO, and UNITO.

With regard to the marketing of infant formula, it was recommended that the governments of each country assume responsibility for the promotion of coherent food and nutrition policies that give special attention to mothers, infants, and children. Breast-feeding was recommended and it was stated that "there should be no sales promotion, including promotional advertising to the public, of products to be used as breast milk substitutes or bottle-fed supplements and feeding bottles. Promotion to health personnel should be restricted to factual and ethical information."

The WHO/UNICEF Geneva Conference recommendations continued:

"There should be an international code of marketing of infant formula and other products used as breast milk substitute. This should be supported by both exporting and importing countries and observed by all manufacturers. WHO/UNICEF are requested to organize the process for its preparation with the involvement of all concerned parties in order to reach a conclusion as soon as possible.

"Monitoring of marketing practices is recommended. Usually this will be done under government auspices. Advertising councils and industry, consumer and professional groups can make an important contribution.

"There should be no marketing or availability of infant formula or weaning foods in a country unless marketing practices are in accord with the national code or legislation if these exist or, in their absence, with the spirit of the

meeting and the recommendations contained in this report.

"Facilities of the health care system should never be used for promotion of artificial feeding; therefore, advertising or promotional distribution of samples of breast milk substitutes through health service channels should not be allowed. Artificial feeding should not be openly demonstrated in health facilities.

"No personnel paid by companies producing or selling breast milk substitutes should be allowed to work in the health care system, even if they are assigned more general responsibilities that do not directly include the promotion of formula, in order to avoid the risk of conflict of interest.

"Production and distribution of foods for infants and young children should be governed by strict legal standards. They should be labeled to indicate proper and safe home preparation. Governments should adopt the recommended international standards covering foods for infants and young children developed by the Codex Alimentarius Committee on Foods for Special Dietary Uses and should support the elaboration of standards by this committee to ensure nutritional value and safety. Governments that have not yet adopted such codes of regulations are urged to do so.

"Products that are not suitably used alone as weaning foods, such as sweetened condensed milk, corn starch, casava flour, and cereal flours, should be required by proper regulations not to be packaged, labeled, advertised, or otherwise promoted in ways that suggest they should be used as a complement to, or substitute for, breast milk. Vigorous educational efforts should be made against their misuse for this purpose by mothers."

In addition, the AAP has recently urged pediatricians, particularly pediatricians in developing countries, to "Encourage breast-feeding of newborn infants wherever appropriate, and educate mothers about the superiority of breast milk as a source of infant nutrition; and *work to curtail inappropriate formula promotional practices.*"

The Council on Scientific Affairs recommends that:

1. the AMA endorse the revised AAP statement on breast-feeding;
2. the AMA endorse the recommendations of the Geneva Conference on Infant and Young Child Feeding that deal with the appropriate marketing and distribution of infant formula and weaning foods;
3. the AMA advise the World Medical Association and the World Health Organization of these endorsements; and
4. this report be adopted in lieu of Resolution 111 (I-78).

Help for Impaired Physicians

Through its Committee on Impaired Physicians, TMA helps doctors who are suffering from alcoholism, other drug addiction, psychiatric disorders or senility. The thrust of the program is rehabilitative, not punitive. The Committee is composed of physicians who have special expertise in these areas, some from personal experience. Effective treatment for these illnesses is achieved most easily when the disease is detected early and family, friends, and associates are urged to avoid misguided sympathy which enables the condition to deteriorate.

HELP US TO HELP

Call the TMA Impaired Physician Program (615) 327-2711; outside Nashville call collect. Phone service available around the clock.

Council on Scientific Affairs Report F

Biological Effects of Non-Ionizing Magnetic and Electromagnetic Radiation

(Appendix M)

There have been frequent allegations in the popular press of biological hazard from electromagnetic and magnetic waves from various sources and it is true that the U.S. population is exposed routinely to radiofrequency radiation from AM and FM radio and VHF and UHF TV stations. A small part of the present environmental radiation is attributable to radar, microwave ovens, satellite communications, and telephone systems. The effect of high-intensity stationary magnetic fields (SMF) which occur in conjunction with the operation of bubble chambers, cyclotrons, space travel, hydroelectric plants and controlled thermonuclear reactors has been viewed with some concern as a potential occupational hazard. Exposure to heavy concentrations of radar waves, microwaves, radio frequency (RF), and the extremely low frequency (ELF) waves most commonly encountered in proximity to high voltage electrical transmission lines, has sometimes been viewed as potentially harmful. For these reasons the Council on Scientific Affairs makes the following report on the current state of scientific knowledge in this area.

Stationary Magnetic Fields

While magnetic fields in the vicinity of controlled thermonuclear devices are but a few gauss (G) at present, they may be considerably increased in fusion reactors and in nuclear physics laboratories of the future. (The gauss is a measure flux or field density and is easily measured by a gauss meter.) These SMF are manyfold stronger than, but of the same nature as, the magnetic field of the earth to which man has always been exposed and which amounts to 0.5 G. They are not to be confused with an alternating magnetic field (AMF) which has been shown to produce the "phosphene effect." When an AMF of 10 to 90 cps and 300 G intensity is applied near the eyes, a shimmering light blue or yellow luminosity appears at the borders of the visual field. This phosphene effect on the CNS is not considered harmful but it does illustrate that impulses within the nervous and muscular tissues may be induced by external magnetic forces. However, it has been difficult to establish the importance of biologic effects of SMF because of their lower magnitude of intensity.

Observations in man exposed to high intensity SMF are quite limited. Exposure to 15,000 G occasioned a foreign taste sensation in one instance, 20,000 G induced pain in filled teeth in another instance, and 100,000 G for a few minutes induced a feeling of bitter coldness, aching bones and a sensation of formication over the hands. Other reports from Soviet workers exposed to an unquantitated high-intensity field for various periods of time suggest that such vague symptoms as fatigue, irritability, dizziness, altered appetite, headache, decreased blood pressure, itching, burning, numbness, and a change in EEG may all be attributable to an SMF. No effect has been reported from occupational exposure to 5,000 G for three man-days per year in U.S. workers.

Animal data provide a much better indication that strong magnetic fields do have biological effects. It has been established that homing pigeons, which depend upon their ability to sense the earth's magnetic field, become disoriented when forced to carry a permanent magnet. Exposure to 200 to 1,000 G occasioned EEG changes in rabbits of uncertain significance and lead continuously exposed mice to live longer, to become more active but less hostile, and to have a better appetite. At higher field strengths of 2,000 to 9,000 G for several days mice develop lesions in the adrenal cortex, a sequestering of megakaryocytes in the spleen, an increase in circulating platelets, a decrease in leukocytes, a delay in wound healing and, perhaps, some protection against irradiation injury and cancer transplantation. Thus, there is ample evidence that immediate biological effects can occur from exposure to sufficiently intense SMF.

It is conceivable that a 5,000 MW thermonuclear reactor used to produce heat by fusion reaction might have magnetic field strengths up to 10,000 G around the torus which would vary inversely with the cube of the distance from its center. From the collected data, Beisher and Reno have suggested that occupational exposure should not be more than 200 G for whole body or head exposure and 2,000 G for arm and hand exposure for extended periods of time. For brief exposure of a few minutes, perhaps ten times these limits could be tolerated.

Electromagnetic Radiation

The U.S. population is regularly exposed to RF radiation, including microwaves. At high levels of radiant flux such non-ionizing radiation can produce excessive tissue heating, but at low intensities of one milliwatt (mW) per sq cm or less, it produces no known biological hazard: it never produces damage by molecular disruption as seen with ionizing radiation. On the basis of studies in 12 large cities, EPA has estimated that less than 1% of the population is exposed continuously to as much as 1 mW/sq cm; however, power densities near FM radio antennae and on upper floors of tall buildings may be hundreds of mW/sq cm and up to 100 mW/sq cm has been found in close proximity to the advanced Air Force Radar System located at Otis Air Force Base. There is a plan to study in detail the possible biological effects of this portion of the electromagnetic wave spectrum for there has been very little systematic work done in humans.

A committee of the National Academy of Sciences has performed a follow-up study on approximately 20,000 Naval personnel with maximum exposure to microwaves from radar during 1950 to 1954 that were compared with 20,000 contemporaneous Navy men who had no such exposure. It was found that there was no difference between the two groups in causes of death, rates of hospitalization in VA or service hospitals, and rates of disability compensation awards. While these data were rather limited, they suggested no serious adverse effects from occupational exposure to radar microwaves. This is further supported by studies on frogs exposed to 2,000,000 mW/sq cm of microwaves, a dose of such radiation that is not quite intense enough to raise the temperature of a tissue, which revealed no histologic abnormalities.

Extremely Low Frequency EMF Waves

Extremely low frequency (ELF) electromagnetic field waves are associated with local perturbations of weather, geomagnetic disturbances, electric appliance discharges and proximity to high voltage electrical transmission lines. They range from .01 to 100 Hz and include the common 60 Hz alternating current fields connected with commercial electrical power. They may also occur as ELF pulses from RF waves.

Reports describing biological effects of continuous ELF fields in animals suggest that field strengths of 4 volts/cm (V/cm) interfered with the growth pattern of flat

worms; and 35 to 70 V/cm led to bone tumors in rats, depressed the growth rate of chicks or mice, and stimulated certain intracellular processes. There is some evidence that wound healing may be enhanced. Very high field strengths of 5,000 to 6,000 V/cm have been reported to kill mice, insects, and mammalian cells in culture. Much weaker fields of 1 V/cm were perceived as noxious by rats and have been shown to affect the reaction time of humans and the trained behavior of rats. Thus, there are some biological effects at low dosage which may be beneficial such as improved wound healing or growth rate, but there are also undesirable effects on behavior and at sufficiently high levels of intensity, perhaps permanent injury. The definition of parameters that lead to such undesirable effects is yet vague and investigation is needed in this area.

There are no regulations in the United States which recognize any hazard from ELF magnetic waves, but in the USSR limits as to duration of exposure to ELF begin to operate at 50 V/cm and all workers must wear protective clothing or use a protective device at levels greater than 250 V/cm. There is a widespread recognition in the United States that more research must be done to establish the full spectrum of biological effects as they vary with wave frequency and field intensity so that rules can be established for occupational exposure as more intense ELF waves may become common in the workplace.

Conclusion

There are significant biological effects from sufficiently intense fields of magnetic, electric, and electromagnetic waves which warrant further investigation. Most of the effects reported to date are temporary and not likely to cause permanent injury except when very high intensity fields are involved.

There is no evidence that serious hazard exists from the current environmental levels of exposure to magnetic, electromagnetic and microwave fields of the urban population.

Occupational exposure to stationery magnetic fields and to ELF electric and magnetic fields may provide significant, and even hazardous, biological effects in close working proximity to high voltage electrical transmission lines, the torus of a thermonuclear fusion reactor or certain advanced nuclear physics laboratory facilities. Safe limits have been proposed for SMF and ELF, but further work is required to better establish the biologically important physical parameters and define the risks involved.

REFERENCES

1. Lazen AG: Risk from non-ionizing radiation. *NAS ALS Lifelines* 5:4-6, 1979.
2. Ketchen E, Porter WE, Balton NE: The biological effects of magnetic fields on man. *Am Ind Hyg Assoc J* 39:1, 1978.
3. Sandler SS, Smith GS, Albert EN: Electromagnetic field effects in nerve tissue. *Aviat Space Environ Med* 46:1414, 1975.
4. Persinger MA, Ludwig HW, Ossenkopp KP: Psychophysiological effects of extremely low frequency electromagnetic fields: A review. *Percept Mot Skills* 36:1131, 1973.
5. Marino AA, Becker RO: Hazard at a distance: Effects of exposure to the electric and magnetic fields of high voltage transmission lines. *Med Res Eng* 12:5-6, 1977.

Streptococcal Sore Throat — Status of the Streptococcal Vaccine

CHARLES E. KOSSMANN, M.D., Editor

WILLIAM BEKEMEYER, JR., M.D.:

A 24-year-old black man came to the City of Memphis Hospital emergency room with a sore throat for one day associated with a dry cough, some dizziness, general malaise, weakness and fever without chills. His oral temperature at home reached 101 F. He had had a tonsillectomy in the past. A sister had a sore throat approximately four days earlier, but she received no treatment and it resolved.

The oral temperature was 100.0 F, blood pressure 120/80 mm Hg, pulse was 80 beats per minute and respirations 16/min. The pharynx was injected and the tonsils were absent, but there was some exudate between the tonsillar pillars and minimal anterior cervical adenopathy; the tympanic membranes were normal. There was an occasional wheeze in the lungs. The cardiac examination was normal. There was no rash.

A throat culture taken in the emergency room grew out a group A β -hemolytic streptococcus.

The patient was treated as an outpatient with 1.2 million units of benzathine penicillin G, intramuscularly, and his sister was recalled to the primary care clinic for throat culture.

ALAN L. BISNO, M.D.:

The differential diagnosis of *sore throat* is theoretically, at least, rather complicated because there is a variety of agents that can cause it (Table 1). The viral group is rather large and heterogenous, and the bacterial group consists primarily of the group A streptococcus. *Corynebacterium diphtheriae* causes a severe exudative pharyngitis, but nowadays in the United States it is a rare disease occurring primarily in pockets of underprivileged, unimmunized individuals. In its florid form diphtheria isn't difficult to distinguish from the usual "strep throat" because of the confluent grayish membrane (as opposed to the patchy types of exudation usually seen with streptococcal pharyngitis),

TABLE 1

INFECTIOUS AGENTS CAUSING SORE THROAT

Viruses	Bacteria	Other
Adenovirus	Group A <i>Streptococcus</i> *	<i>M. pneumoniae</i>
E-B virus	<i>C. diphtheriae</i>	
Parainfluenza	<i>N. gonorrhoeae</i>	
Influenza	<i>N. meningitidis</i> (?)	
Coxsackie	Anaerobes†	
Herpes simplex		
Rhinovirus		
Coronavirus		
Other		

* Occasionally other groups of β -hemolytic streptococci.

† Vincent's angina.

the respiratory embarrassment, and the central nervous system and cardiac manifestations.

Although gonococci are frequently seen in asymptomatic pharyngeal infections, acute gonococcal pharyngotonsillitis is a relatively rare disease found only in specific epidemiologic circumstances. We don't know whether the meningococcus can cause a sore throat; we do know that a preceding nasopharyngitis with a mild scratchy sore throat is common as a prodrome to classic meningococcal meningitis. It is unclear whether this is due to the meningococcus itself or to a concomitant viral infection which predisposes to dissemination of a meningococcus carried in the pharynx. Another relatively rare entity is Vincent's angina, an anaerobic form of pharyngitis characterized by an extensive grayish membrane, the intensely fetid odor which one associates with anaerobic infections, and usually a dominant gingivostomatitis with only secondary involvement of the pharynx. It also is not difficult to distinguish from strep throat.

Although *Mycoplasma pneumoniae* can cause

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Presented July 23, 1980.

sore throat, it is a relatively uncommon cause. Moreover, none of our current routine laboratory diagnostic techniques will detect it in the throat in time to institute specific treatment, and if it is unaccompanied by lower respiratory tract infection, there is really no urgent reason for treatment. So, while there is a wide variety of agents that can be listed as causes of sore throat, for all practical purposes the differential diagnosis usually lies between bacterial and viral etiologies. Indeed, in the vast majority of instances, the diagnosis simplifies itself even further to strep throat vs. viral sore throat.

What proportion of sore throats is actually caused by the group A streptococcus? If you culture the throats of 100 schoolchildren in a normal population, roughly 85 of them will be negative while 15 will be positive. These 15 would for the most part represent asymptomatic carriers. If on the other hand you take a group of 100 schoolchildren presenting with an acute pharyngitis to an emergency room, an outpatient clinic, or a physician's office, the situation is different. Approximately 30 of the 100 will have positive cultures and 70 will have negative cultures. Of the 30 positives, half will represent the group of carriers that you had identified in the normal population, and the other half, if you follow them carefully, will demonstrate an antibody response, thereby meeting the usual criterion for immunologically significant infection. Thus, about 15 of every 100 sore throats in school-aged children are caused by group A streptococci, and another 15 or so by agents that can't be identified at our current level of technology but are presumably viral.

Diagnosis of Strep Throat

How can you diagnose streptococcal sore throat? The symptoms and signs are fairly classic and have been described many times over. The symptoms include (1) a sore throat that is notable for its sudden onset (the patient can often date the hour of its beginning); (2) pain on swallowing—not just a scratchy throat as seen with a mild viral infection but a raw feeling; (3) headache; (4) fever of variable severity but which may be as high as 104 F particularly in younger children; (5) abdominal pain, nausea and vomiting (also primarily in younger children), but no diarrhea. The signs include a red throat, an exudate, and regional lymphadenitis. The latter denotes actual *tenderness*, not merely enlargement, of the nodes at the angle of the jaw.

If there is, in addition, a classic scarlatiniform rash, the diagnosis is obvious.

Occasionally, there may be local suppurative complications of the disease such as an acute otitis, sinusitis, or even a peritonsillar or retropharyngeal abscess. But in the absence of any of the above, manifestations like simple coryza, hoarseness, cough or conjunctivitis are not suggestive of a streptococcal infection.

Although the above description is a classic one, the truth is that the signs and symptoms of streptococcal sore throat are rather variable. For example, the sign which many physicians consider rather diagnostic for strep throat is exudative pharyngotonsillitis. In analyzing data from a number of studies, however, it can be concluded that only about half of all cases of exudative pharyngitis are due to group A streptococcus, and about half of all group A streptococcal infections are associated with exudative pharyngitis. So this hallmark of streptococcal infection is not really dependable. Recently, for example, I saw a member of the housestaff who had such a horrendous pharyngitis he could no longer take liquids. The tonsils were greatly enlarged and in the peritonsillar area there was an extensive exudate. He turned out to be a classic case of infectious mononucleosis.

Breese and Disney¹ in Rochester, N.Y., and Stollerman and his associates,² while he was in Chicago, compared their clinical diagnoses with the results of throat cultures. They were only able to predict, on the basis of their clinical judgment, which sore throat patients would be found to have throat cultures positive for streptococcus in from 55% to 75% of cases; in both studies negative throat cultures were accurately predicted about three fourths of the time. Of course in certain subgroups, for example elementary schoolchildren with exudative pharyngitis, they might have done better. Overall, however, their "batting average" was unacceptable for diagnosing streptococcal infections to prevent rheumatic fever.

Other ways have been suggested in the medical literature to cope with the problem. Clinical algorithms have been suggested by certain investigators, and, indeed, if carefully selected clinical and epidemiologic criteria are used, one can do fairly well in the prediction of positivity. Such algorithms still lead to considerable overtreatment and don't give the physician (at least in my view) adequate security against missing a case of strep throat that could potentially end up

as rheumatic fever.

Others have suggested doing a Gram stain of the pharyngeal exudate.³ I think that procedure would have to be left to a very experienced microscopist, given the chance of contamination of specimens with the abundance of nonpathogenic streptococci normally present in the oral cavity.

So the most reliable and straightforward method of diagnosis is throat culture. Even physicians using the throat culture as a guide will necessarily overtreat somewhat, because the throat culture cannot reliably differentiate cases from carriers, but it will allow you to avoid antibiotic therapy in the 70% of sore throat patients whose throat cultures are totally negative.

Treatment

The treatment of streptococcal sore throat is fairly standard. For patients weighing more than 60 lb, one intramuscular injection of 1.2 million units of benzathine penicillin G (Bicillin) is recommended by the American Heart Association.⁴ For patients weighing less than 60 lb, a dose of 600,000 units is adequate. This is the best therapy because it is the most effective, gives a constant penicillinemia, and doesn't depend on patient compliance. Oral penicillin G or V therapy—250,000 units three or four times a day—is acceptable, but it must be continued for a full ten days to assure eradication of streptococci from the pharynx. The ten-day period of oral therapy is very difficult to enforce because the patient will be much improved in four or five days and thereafter may forget to take the medication. For penicillin-allergic individuals erythromycin is the drug of choice. The prevalence of tetracycline-resistant strains is too high to trust that antibiotic. Sulfonamides, while excellent for prophylaxis of streptococcal infection, are ineffective in eradicating streptococci from the pharynx in an acute infection (a prerequisite for prevention of acute rheumatic fever) and must not be used. Antibiotic lozenges are obviously unacceptable, and clindamycin shouldn't be used because of the risk of diarrhea or, in rare cases, fulminant *C. difficile* enterocolitis.

Why am I bothering to repeat these simple details that you have probably heard so often before? When we look at national data, such as a study of treatment of upper respiratory infections in physicians' offices during the year 1972 based on 1,400 patient visits,⁵ we see that about 28% of the people consulting physicians for a common cold received a broad spectrum antibiotic, an-

other 21% got penicillin, and 2% were treated with sulfonamides. Even granting that some of these patients genuinely required antibiotics because of suppurative complications, these figures would seem to indicate very substantial overprescribing. Moreover, recent review of our own emergency room records at City of Memphis Hospital indicates that a very wide variety of nonstandard antibiotic regimens is being prescribed by housestaff members for sore throat. So we as a profession are still not managing this exceedingly common and relatively straightforward problem in an optimal fashion.

The issues of what to do with treatment failures, pharyngeal streptococcal carriers, and family contacts are of continuing interest and rather complex. Perhaps we will discuss them on another occasion.

EDWIN H. BEACHEY, M.D.:

Investigators have been trying to develop a streptococcal vaccine against those strains that precipitate acute rheumatic fever for over 50 years. Vaccines containing whole streptococci caused severe local reactions with sloughing and were, therefore, unsuitable for human use. About 60 years ago, Dr. Rebecca Lancefield⁶ at the Rockefeller University first described the substance on the surface of the streptococcus that is responsible for calling forth antibodies that protect against group A streptococci. The antigen is called M protein and is located on fibrillar or hair-like projections on the surface of the bacteria. In Figure 1 an ultrathin section of a streptococcus exhibits a hairy surface. Swanson and

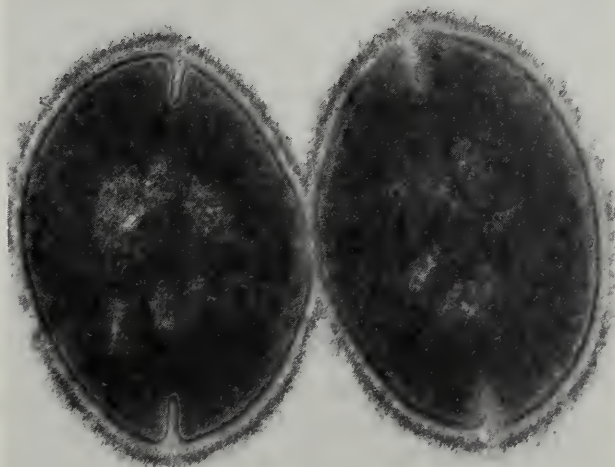


Figure 1. Electron micrograph of ultrathin section of group A streptococcal cells showing hairy surface projections containing the M protein antigen.

his colleagues⁷ showed that the surface "hairs" contain M protein, the type-specific virulence factor Lancefield showed was responsible for resistance of the organisms to phagocytosis. Streptococci mixed with fresh human blood in a test tube, rotated at 37°, and smeared on glass slides show that organisms rich in M protein resist ingestion by polymorphonuclear leukocytes; the bacteria just go merrily on their way and multiply. However, if antibody made in rabbits against the M protein of this organism (in this case a strain of type 24 streptococcus) is added, the organisms become coated with antibody and are readily recognized by the polys which ingest and kill them.

Extraction of the Streptococcal M Protein

When it was learned that the antibody against the M protein is opsonic in vitro and protective in mice challenged with live streptococci, it seemed a simple matter to extract and purify it for use as a vaccine. It turned out to be not such a simple matter because the M protein is tenaciously associated with many toxic products that are separated from it with difficulty. Other obstacles have stood in the way of developing a safe and effective streptococcal vaccine. One seemingly big obstacle is the fact that over 70 different serotypes of M protein have been reported to date. Theoretically, a fully protective vaccine would have to be multivalent incorporating all 70 or so serotypes of M protein. Epidemiologic studies have shown, however, that most streptococcal infections in any given community can be accounted for by as few as a dozen or so types. Therefore, a vaccine against these predominant types should prove effective. In addition, we have found recently that protection against streptococcal infections may not be as type-specific as was previously thought. Recent studies in our laboratories (unpublished) indicate that vaccination with antigens from just a few serotypes may invoke broad cross-protective immunity.

Another problem has been the toxicity already mentioned. All streptococcal products, especially cell wall preparations, have produced such severe local reactions that doses of the antigen large enough to produce a primary immune response could not be given. Even purified M protein vaccines made by the classical Lancefield method,³ namely to extract the organism with hot acid and use the extract as vaccine, were still

often toxic. One of the most worrisome problems is the association of many of the streptococcal antigens with other antigens that are capable of stimulating antibodies that are cross-reactive with the host's tissues, especially the heart and kidneys. Accordingly, we have been fearful of using even the purest vaccine preparations without carefully checking them for cross-reactive antigens to tissues. To rule out this possibility has required a prodigious amount of work.

Because most previous vaccines tested were toxic and some contained tissue cross-reactive antigens, we sought different methods to extract the M protein. We came upon one of mildly treating the organisms with pepsin to give, as Dr. Stollerman likes to say, the hairy streptococcus a "shampoo" which gently washes off the M protein. With this method, we have been able to purify to homogeneity three serotypes (M5, M6 and M24) of M protein. The NH₂ terminal ends of each protein have been analyzed for amino acid sequences; the occurrence of only one new amino acid at each step of degradation confirmed homogeneity of the preparations.

Immunization

We have shown that if rabbits are immunized with these type-specific M proteins in alum precipitate, type-specific protective or opsonic antibodies will be produced. If three doses two weeks apart of type 24 M protein in alum precipitate are given to mice and the animals then directly challenged with the homogenous type streptococcus six weeks after the first dose, protection is demonstrable. Among 30 mice injected just with alum without M protein, none survived; the LD₅₀ was less than 200 microorganisms per mouse. Of those immunized with the type 24 vaccine and alum, 28 of 30 survived; in these the LD₅₀ was greater than 2 million microorganisms. Thus there was a 10,000-fold increase in protection after immunization. Further, we showed that none of the antibodies that were raised in mice or rabbits cross-reacted with heart tissue.

This encouraged us to proceed with immunization of humans. First, we did skin tests. The typical skin reaction at 24 hours to the older, cruder preparation of M protein is a kind of delayed reaction, actually more like a Jones-Mote reaction, because it is evanescent, disappearing after 48 hours. With 1μg of the purified, pepsin-extracted M24 there was no reaction. Up to 10 μg still gave no local reaction, indicating lack of local toxicity. We tested 37 young adults,

mostly medical students and house officers; none had skin reactions. Next, we chose two of these volunteers to determine the dose required to produce an immune response. We found that 200 μ g given every two weeks for three doses resulted in a brisk immune response manifested by rising opsonic antibody titers. The opsonic (and presumably protective) antibodies promote phagocytosis and killing of homologous type streptococci. Injection of the immune sera into mice protected them passively against challenge by the vaccine strain of streptococci.

We chose 11 additional people to immunize with three doses, each separated by a two-week interval. A brisk opsonic response occurred, and recurred after a later booster injection. In one individual no response was shown to heterologous type 6 organism, but there were two subjects in a group of ten who did develop some cross-protective antibody to the type 6 organism after immunization with type 24. Of the ten additional individuals immunized in this way, eight had opsonic antibodies at six weeks but only three at ten weeks. Reinforcing doses given at 12 weeks to four of these individuals again raised opsonic antibody titers.

These results were very encouraging because, compared to other immunogens and vaccines, these are really tremendous immunologic responses. It is usual to consider a response good if over 50% of the recipients of a particular vaccine develop antibodies.

Passive Transfer

When we passively immunized two groups of 12 mice by injecting sera of two volunteers immunized with M24 into the peritoneal cavity, and then challenged them with type 24 streptococci, only one of 12 mice died in each group, whereas 11 of 12 controls that had received only preimmune human serum died. Two additional groups of 12 mice passively immunized with these immune sera and then challenged with type 6 streptococci were not protected when compared to control animals injected with the same type. These results indicate that the protective effect is type-specific.

Synthetic M Protein

With the help of Dr. Kang and his group we have gone on to do an amino acid sequence of several of the M protein fragments. With this information we have been able to synthesize and covalently link the fragment to a polylysine

molecule. The conjugated synthetic fragment has proved to be immunogenic and protective in laboratory animals against the whole type 24 M protein; we have also partially sequenced type 5 and type 6 M proteins and found some homologies among all three molecules. These homologous regions may account for cross-protective immunity observed in certain vaccinated humans and laboratory animals among these three serotypes of M protein. We also have evidence that certain protective determinants buried in one serotype of M protein may be exposed on the surface of other serotypes of M protein.

Thus, the continued identification of the antigens of various M proteins may yield a pool of small peptides which ultimately may be synthesized and used with confidence as a broadly protective vaccine against serious streptococcal infections in man.

GENE H. STOLLERMAN, M.D.:

When I started work on this problem about 1948, protein chemistry was so primitive that the prospect of purifying the M protein to molecular homogeneity, knowing the exact amino acid sequence, synthesizing the amino acids into the peptide you want, and then identifying which M types are required in the vaccine to afford the protection you want—and the notion that all this could be accomplished within my lifetime—would have been almost ridiculously optimistic. That Dr. Beachey, who started with me as a student 20 years ago, has achieved these objectives is really a remarkable demonstration of perseverance, intelligence, and talent dedicated to reaching a research goal. Now that we have a potential vaccine, the idea that a limited number of M types may be all that is necessary to control rheumatic fever through immunization has been proposed by Dr. Bisno, who came to me a little more than a dozen years ago as a research fellow. He has studied the epidemiology of rheumatic fever in many parts of the world and it looks as though the major pockets of severe rheumatic fever could well be caused by relatively few group A streptococcal M types. In fact, Dr. Bisno's recent review of the world's literature doesn't reveal more than perhaps 20 documented M types that have caused most of the epidemics of rheumatic fever in the world. It's possible, therefore, that if we look around the world and study different populations, as Dr. Bisno has just done in Chile, that a few M types may dominate

the epidemiology of a given population and cause most of its rheumatic fever. He is on his way back to Chile to try to determine whether that poor country, whose children suffer terribly from extensive rheumatic fever, might be a good place to start some trials with pepsin extracted M vaccines.

In the United States there is no big demand for such a vaccine right now. One of the most gratifying developments of the last 20 years has been the striking decrease in the incidence of rheumatic fever. I haven't seen a case on the wards of the City of Memphis Hospital more than once or twice a year for the past several years. Many cases indeed are unrecognized because the housestaff often doesn't even think of the disease in the differential diagnosis of polyarthritis. In the affluent countries of western Europe and North America, the control of rheumatic fever by good housing, good therapy, abundant (but not always good) antibiotic usage, and many other factors have made rheumatic fever a much rarer disease than previously. Therefore, I don't expect that there will be great enthusiasm in the western world for everybody getting the vaccine. But three fourths of the world is still plagued by this most common infectious cause of heart disease in people under 40 years of age—most of Asia, Africa, South America, and China, to name a few areas. Further, we don't know what to do with all the people who have rheumatic heart disease who are on antibiotic prophylaxis; we don't know when to stop or when it is safe to stop. You can't tell someone with mitral stenosis not to go the Middle East or to South America or any place where there may be dangerous epidemics. Surely if we could immunize the rheumatic heart population effectively, we could answer the question of when to stop prophylaxis.

Finally, the group A streptococcus is still exquisitely sensitive to penicillin, but in Japan, where there has been indiscriminate prescription of antibiotics because the people there can buy them over the counter, the streptococcus is already highly resistant to the major broad spectrum antibiotics—tetracycline, erythromycin, chloramphenicol. A weird kind of streptococcus has evolved there that is resistant to all those antibiotics, but fortunately is still sensitive to penicillin. Should penicillin resistance ever develop we are certainly going to need something more to protect against the disease. For these reasons I feel that despite lack of enthusiasm of

the pharmaceutical industry to make a vaccine in the face of all the threatened legalisms and lawsuits, we still feel that a successful streptococcal vaccine would be an extraordinarily important contribution to protection against one of the most ubiquitous organisms in the world. We are, therefore, now beginning human studies of the multiple M types that Dr. Beachey showed you; we have already succeeded in immunizing volunteers with the M24. We are going to be trying out the M5 vaccines in small numbers of volunteers, and then the trivalent vaccine. Perhaps then we may look at Chile and other places to see what other types we need to incorporate in a vaccine. Any questions now for Dr. Bisno or Dr. Beachey?

DR. KOSSMANN:

Is it likely that the vaccine will protect against nephritis and the nephritogenic streptococci?

DR. STOLLERMAN:

That is a future possibility if we get to know against which strains to develop a vaccine. The problem is to identify which strains have nephritogenicity. The skin strains are the main culprits in producing nephritis; they are very ubiquitous, and there are many different types. Ultimately we might be able to include enough streptococcal M proteins in one vaccine to give a broad enough immunity to protect against almost all streptococci. I'll let Dr. Beachey comment on it.

DR. BEACHEY:

Your last point is just what I was going to comment on. The type 56 streptococcus is a skin strain which has been associated with nephritis. It is possible that if we make the right combination of M proteins we may afford cross-protection against many types.

DR. STOLLERMAN:

I think one of the points that we have been astonished about is that the intact streptococcus has only one M type antigenic determinant by which it is identified by antibodies. When Dr. Beachey opened up a peptide he seems to have exposed buried determinants of several different M types, and therefore can produce antibodies against a wide variety of peptides previously not immunogenic because they were not exposed on the surface.

(Continued on page 276)

EKG of the Month

W. BARTON CAMPBELL, M.D.

An 85-year-old woman was admitted to St. Thomas Hospital with increasing dyspnea and edema for three weeks. She had longstanding congestive heart failure and had been taking digoxin (Lanoxin) 0.125 mg orally daily. On admission she had bilateral rales and a prominent S₃ gallop. A grade II murmur of mitral insufficiency was present at the apex and radiated to the left axilla. The pulse was irregularly irregular at a rate of 70 beats per minute. An electrocardiogram disclosed atrial fibrillation. Chest films showed bilateral pleural effusions. The day of admission her serum digoxin level (drawn 23 hours after the preceding dose of digoxin) was 1.9 ng/ml. Her potassium was 3.6 mEq/liter. A few hours after admission she was noted to have a regular rhythm at a rapid rate. A rhythm strip was obtained (Fig. 1). The leads demonstrated are leads I, II and III; they were obtained simultaneously on a three-channel machine.

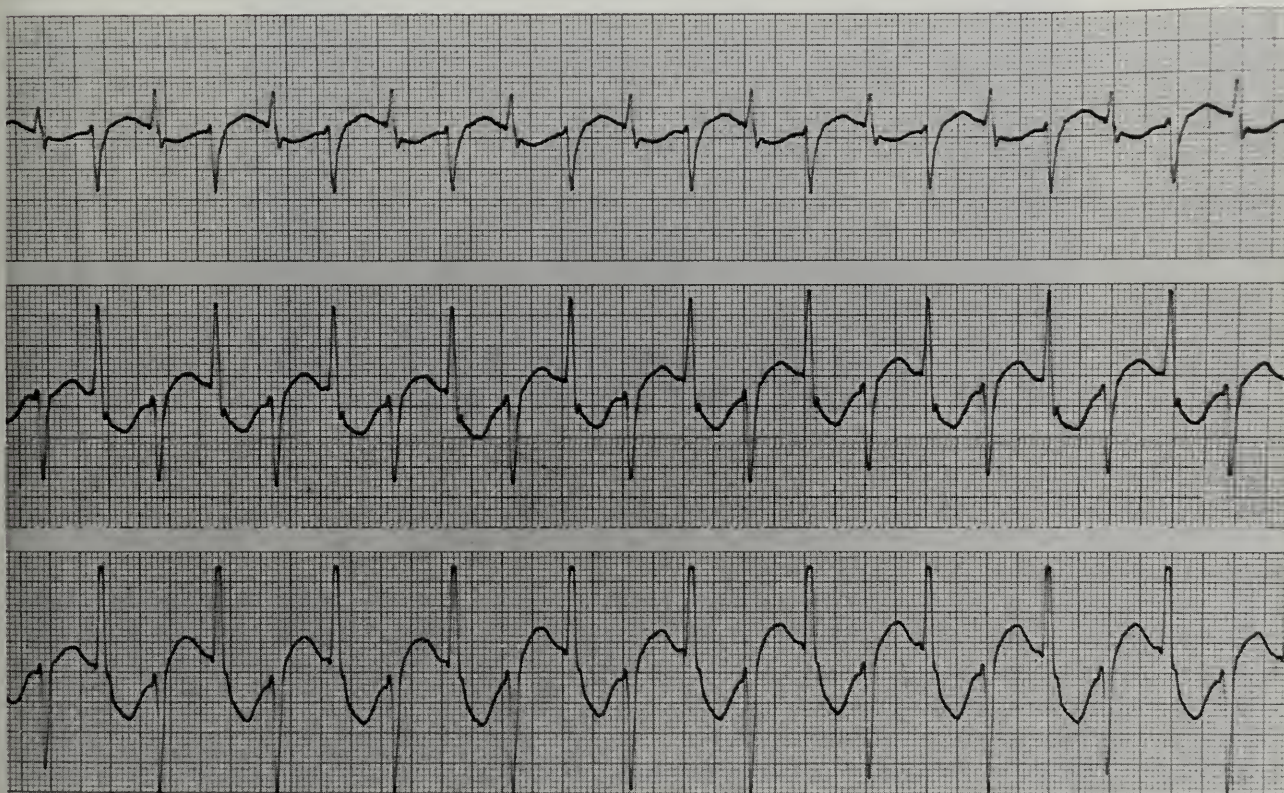


Figure 1

From the Department of Cardiology, St. Thomas Hospital, Box 380, Nashville, TN 37202.

Discussion

The RR interval is perfectly regular at a rate of 150/min. Although there are some irregularities from time to time in the baseline, P waves cannot be identified with certainty. The outstanding characteristic of this tracing is the dual morphology of QRS complexes with alternating right bundle branch block (second complex from left) and left anterior hemiblock (first complex) configurations.

The term "bidirectional tachycardia" was proposed for this arrhythmia in 1922.¹ Bidirectional tachycardia occurs infrequently and is most commonly seen with digitalis administration. It is usually felt to represent digitalis intoxication, but it may occasionally be seen in patients who are not receiving digitalis. It has occurred, for example, in atrial fibrillation in approximately half the reported cases. It is usually encountered in patients with severe myocardial disease, and one study suggests that the one-year survival of patients who have this arrhythmia is 15%.²

The term "alternating tachycardia" has been used to describe a regular rhythm with rapid rate that has alternating QRS amplitude, although

scrutiny of other leads frequently reveals the "bidirectional" nature characterized in this rhythm strip. Bidirectional tachycardia should not be confused with electrical alternans (alternating voltages often seen in the presence of pericardial effusion).

The mechanism of this dysrhythmia may be variable. His bundle studies have clearly demonstrated both supraventricular² and ventricular^{3,4} pacemaker sites in patients with bidirectional tachycardia. If the tachycardia is supraventricular it is postulated that there is alternating conduction through intraventricular conduction pathways. It is very common to see a right bundle branch block pattern alternating with a posterior or anterior hemiblock pattern,⁵ as in this patient.

DIAGNOSIS: Bidirectional tachycardia. 

REFERENCES

1. Schwensen E: Ventricular tachycardia as the result of the administration of digitalis. *Heart* 9:199, 1922.
2. Cohen SI, Voukydis P: Supraventricular origin of bidirectional tachycardia. *Circulation* 50:634, 1974.
3. Cohen SI, Deissroth A, Hecht HS: Infra His bundle origin of bidirectional tachycardia. *Circulation* 47:1260, 1973.
4. Morris SN, Zipes DP: His bundle electrocardiography during bidirectional tachycardia. *Circulation* 48:32, 1973.
5. Rosenbaum MB, Elizari MV, Lazzari JO: The mechanism of bidirectional tachycardia. *Am Heart J* 78:4, 1969.

Medical Grand Rounds . . .

(Continued from page 274)

In the May issue of the *Journal of Experimental Medicine*, there is an extremely important paper by Dale, Ofek and Beachey⁸ that provides the first biochemical demonstration that a single peptide may produce antibodies against multiple types of M protein which are buried deep in the peptide, and which in their natural state were not immunogenic. That observation, I think, may hold an answer to an old question as to how many peptides do we have to give to produce immunity to the many different types of streptococci. It may turn out, as Dr. Beachey has shown in rabbits, that those who get three M proteins in one vaccine may really be given a very broad immunity. That may simulate the natural situation where, as you grow up, you may have had four or five or six strep throats but you seem to become less prone to getting repeats unless you are attacked in an epidemic by an unusually virulent, unique type. A wide spectrum of immunity may be stimulated by no more than one course of immunization against a variety of M types. That is what we are hoping for.

We will know with the first group of humans immunized against three M types whether immunity has developed against several different types of streptococci. If we can produce multiple-type immunity, that would be a major victory and it would be a milestone in the history of streptococcal disease. 

REFERENCES

1. Breese BB, Disney FA: The accuracy of diagnosis of beta streptococcal infections on clinical grounds. *J Pediatr* 44:670-673, 1954.
2. Siegel AC, Johnson EE, Stollerman GH: Controlled studies of streptococcal pharyngitis in a pediatric population. I. Factors related to the attack rate of rheumatic fever. *N Engl J Med* 265:559-566, 1961.
3. Crawford G, Brancato F, Holmes KK: Streptococcal pharyngitis: Diagnosis by Gram stain. *Ann Intern Med* 90:293-297, 1979.
4. Kaplan EL, Bisno AL, Derrick W, et al: American Heart Association Report. Prevention of Rheumatic Fever. *Circulation* 55 (no. 1):S1-4, 1977.
5. Simmons HE, Stolley PD: This is medical progress? Trends and consequences of antibiotic use in the United States. *JAMA* 227:1023-1028, 1974.
6. Lancefield RC: The antigenic complex of *Streptococcus hemolyticus*. I. Demonstration of O type specific substance in extracts of *Streptococcus hemolyticus*. *J Exp Med* 47:91, 1928.
7. Swanson J, Hsu KC, Gotschlich EC: Electron microscopic studies on streptococci. I. M antigen. *J Exp Med* 130:1063-1091, 1969.
8. Dale JB, Ofek I, Beachey EH: Heterogeneity of type precise and cross-reactive antigenic determinants within a single M protein of group A streptococci. *J Exp Med* 151:1026-1038, 1980.

Radiology Case of the Month

THOMAS J. DEMPSEY, M.D. and RANDALL L. SCOTT, M.D.

A 24-year-old black woman presented with bilateral hip pain. Pertinent laboratory findings included a positive LE prep and a normal hematocrit. A radiograph of the pelvis is reproduced below (Fig. 1). What is your diagnosis?

- (1) Rheumatoid arthritis
- (2) Pyogenic arthritis
- (3) Old slipped capital femoral epiphysis
- (4) Ischemic necrosis



Figure 1. AP view of the pelvis, showing deformed femoral heads.

Radiographic Findings

Both hips demonstrate flattening of the femoral heads with a mixture of mottled bony sclerosis and lucencies. The hip joint spaces are normal and symmetrical, and the acetabula are uninvolved. The remainder of the pelvis, sacroiliac joints and lower lumbar spine are normal. This appearance is typical of ischemic necrosis of the femoral heads. The association of a

positive LE prep suggests that the bony changes are secondary to systemic lupus erythematosus (SLE).

Rheumatoid arthritis is a synovial disease which results in destruction of joint cartilage and formation of vascular connective tissue known as pannus. The classical radiographic findings include periarticular demineralization, symmetrical joint space narrowing, and cortical erosions. Additional findings may include cartilage calcification (chondrocalcinosis), subluxations, and bony ankylosis. Later in the disease when the hips are involved, bone softening causes deepening of the acetabulum, resulting in *protrusio*.

From the Department of Radiology, University of Tennessee Center for the Health Sciences, 865 Jefferson Ave., Memphis, TN 38163.

acetabuli (Otto's pelvis).

Severe rheumatoid arthritis may result in secondary degenerative arthritis in a weight-bearing joint resulting in asymmetrical joint space narrowing, sclerosis, and osteophyte formation. Superimposed ischemic necrosis may result. Since the joint space and acetabulum are normal in the case, it is unlikely that the ischemic necrosis is secondary to rheumatoid arthritis.

Pyogenic arthritis usually presents as a monarticular process, although gonococcal arthritis has a predilection for multifocal involvement in 80% of cases.^{1(p 803)} The hallmark of acute pyogenic arthritis is early cartilage destruction resulting in joint space narrowing, with cortical and subchondral bone destruction at both articular surfaces. The process is so aggressive and rapid that there is no time for osteoporosis to develop prior to joint destruction. This is in contrast to tuberculous arthritis, where periarticular demineralization is commonly seen due to the more indolent nature of the disease. Bony ankylosis may be a late manifestation.

Two important factors speak against pyogenic arthritis in the current case: (1) preservation of the joint space, and (2) lack of involvement of the acetabular articular cortex.

The last choice, old slipped capital femoral epiphysis, may be considered in the differential diagnosis. This condition is more commonly seen in men and is usually unilateral, although it does occur bilaterally in 20% of patients. The average age of onset for this condition is usually 13 to 14 years.^{1(p 190)} Radiographically, when evaluating a normal hip, a line drawn tangentially to the lateral aspect of the femoral neck will pass through the lateral portion of the capital femoral epiphysis as described by Klein.² If epiphyseal slippage has occurred, the epiphysis will be displaced medially and posteriorly, and can best be seen on the "frog leg" lateral of the hips. When this occurs, the line of Klein will not intersect the femoral epiphysis. In this case, the patient's age and sex as well as the radiographic findings all militate against the diagnosis of slipped capital femoral epiphysis.

Discussion

Ischemic necrosis of the femoral head is produced by two primary processes—vascular thrombosis and trauma. The more common non-traumatic causes include sickle cell anemia, steroid therapy, chronic pancreatitis, arteriosclerosis, and SLE.³ In this case a positive

LE prep, in the absence of a better etiology, suggests that SLE is the cause of bilateral ischemic necrosis of the femoral heads. Presumably, lupus vasculitis leads to vascular occlusion, with infarction of the involved bone.⁴ Since the patient was not receiving any medication upon admission, ischemic necrosis secondary to steroid therapy for SLE can be ruled out.

Nontraumatic ischemic necrosis is most commonly seen in the hip and is usually bilateral.⁵ The most commonly observed roentgenographic features include sclerosis, mottled trabecular pattern, localized rarefactions, periosteal bone apposition, subchondral radiolucent line ("rim sign"), and subchondral depressions. Probably the earliest sign is a localized zone of sclerotic bone which may be initially interpreted as a bone island. Mottling of the trabecular pattern is another early sign which may be quite subtle. Periosteal bone may be deposited along the inferior aspect of the femoral neck, probably representing a microfracture at the junction of the femoral head and neck.

The rim sign, first described by Waldenström,⁶ has been advocated as a sensitive and specific indicator of early ischemic necrosis of the femoral head. The line is now thought to represent an area of subchondral separation rather than resorption of necrotic bone as originally described by Waldenström.⁷ Since the anterolateral aspect of the femoral head is most frequently involved in the early stages, the frog leg lateral view is best for demonstrating the subchondral radiolucent line.

Orthopedic treatment during the early stages of ischemic necrosis of a weight-bearing joint consists of either casting or total bed rest. This may result in complete healing of the necrotic bone. Without appropriate therapy, extensive damage to the bone may result, as in this case.⁵

DIAGNOSIS: (4) Ischemic necrosis. 

REFERENCES

1. Greenfield GB: *Radiology of Bone Diseases*. Philadelphia, JB Lippincott Company, 1980.
2. Klein A, Joplin RJ, Hanelin J: Roentgenographic features of slipped capital femoral epiphysis. *Am J Roentgenol* 66:361-374, 1951.
3. Dubois EL, Croyen L: Avascular (aseptic) bone necrosis associated with systemic lupus erythematosus. *JAMA* 174:966-971, 1960.
4. Bleifeld CJ, Inglis AE: The hand in systemic lupus erythematosus. *J Bone Joint Surg (Am)* 56-A:1207, 1974.
5. Jones JD, Engleman EP: Osseous avascular necrosis associated with systemic abnormalities. *Arthritis Rheum* 9:728-739, 1966.
6. Waldenström H: The first stages of coxa plana. *J Bone Joint Surg* 20:559-566, 1938.
7. Norman A, Bullough P: Radiolucent crescent line: Early diagnostic sign of avascular necrosis of femoral head. *Bull Hosp Joint Dis* 24:99-104, 1963.



GEORGE A. ZIRKLE, JR.

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Most physicians do not want to advertise. Most are willing to let their reputations speak for them. Let's face it. The purpose of most, if not all, advertising is to solicit "business," or patients, or "goodwill." But advertising by professionals, properly done, is now legally permissible. Ethical concepts cannot violate an individual's "right" to advertise.

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Most physicians rely on the time-honored concept that the most worthy and effective advertisement possible is the establishment of a well-merited reputation for professional ability and fidelity. This cannot be forced, but must be the outcome of character and conduct.

Sincerely,

A handwritten signature in cursive script that reads "George A. Zirkle Jr. M.D.".

PRESIDENT

One Moment Please . . .

One moment to say we appreciate the dedication of all the professionals on our staff. The Tennessee Medical Association has a knowledgeable and responsive staff that provides help and assistance to all our membership.

One moment to say we appreciate the dedication and time of all of those physicians who serve on the SVMIC Board, the Board of Medical Examiners, the TMA Board of Trustees and all of the standing and special committees.

Each of you has helped make the Tennessee Medical Association an outstanding and responsive Association. I pledge my support to Allen Edmonson, who will be installed as President of the Tennessee Medical Association this month.

G.A.Z.

**president's
page**

THE NEW PRESIDENT



ALLEN S. EDMONSON, M.D.
MEMPHIS

ALLEN S. EDMONSON, M.D.

93rd President – Tennessee Medical Association

The Tennessee Medical Association's 5,000 plus members welcome their 93rd President, Allen S. Edmonson, M.D. If hard work and dedication are requirements for being the TMA President, Allen Edmonson is one of the most qualified ever to fill that post. He brings to the office the high professional standards that each member of the Association so rightly demands. The office of the presidency of the oldest professional association in the state is indeed an honor. The House of Delegates' choice of Dr. Edmonson to lead the Association in its 152nd year is justified, and the challenges before us will be met with the enthusiasm and confidence that will make each member proud.

One may say that our new President is "home grown." Born in Martin, Tennessee in 1927, he attended Martin city schools until his high school graduation in 1945. After receiving his BA degree from the University of Tennessee in Knoxville, he began his medical education at the UT College of Medicine in Memphis; he received his MD degree in 1953 and concluded an internship in 1954 at the City of Memphis Hospitals. In 1955-56 he did his internship in surgery and pathology at Kennedy Veterans Administration, and from 1956 until 1959 he completed his orthopedic residency at the Campbell Clinic. He has practiced orthopedic surgery at the Campbell Clinic since 1959 and is a former vice president of the Clinic. He is board certified by the American Board of Orthopedic Surgeons and is a member of the American Academy of Orthopedic Surgeons.

In his 22 years as a member of the Memphis-Shelby County Medical Society and the Tennessee Medical Association, Dr. Edmonson has served with distinction in virtually every office in each organization. He has been a member of the House of Delegates of the Memphis-Shelby County Medical Society since 1975, and in 1979 he was the Society's president.

Dr. Edmonson has served in the Tennessee Medical Association's House of Delegates since 1972. He was elected vice speaker in 1974 and in 1978 was elected Speaker of the House. By virtue of these offices he has served as a member of the TMA Board of Trustees since 1974. For a

number of years he has been a member of the Legislative Committee and is former chairman of the Group Insurance Committee.

In 1975, the physicians in Tennessee experienced one of the most critical professional situations in the state's history. Everyone writing professional liability insurance in Tennessee at that time "pulled the rug out from under the physicians." A bold effort was undertaken at that time to form a physician-owned company. Dr. Edmonson was one of the original founders of that company and has served as the chairman of its board of directors since its inception. Many physicians had a part in the formation of the State Volunteer Mutual Insurance Company; however, few have worked as hard and for as many long hours as our new President. Largely because of his leadership, SVMIC is one of the most efficient and actuarially sound physician-owned insurance companies in the country.

Dr. Edmonson is currently the chief of staff of the Baptist Memorial Hospital in Memphis, having formerly served as a member of its medical staff executive committee and chief of the Department of Orthopedic Surgery. He is also the chief of staff at the Crippled Children's Hospital in Memphis, and is a former chief of surgery at LeBonheur Children's Hospital in Memphis.

In addition to his activities in organized medicine, Dr. Edmonson is likewise recognized and respected for his activities in community medical affairs. He is currently a member of the board of directors of the Mid South Medical Center Council and the Memphis Blue Cross-Blue Shield, and is secretary of the Scoliosis Research Society.

While receiving support of the entire membership in his presidential endeavor, no doubt his greatest supporter throughout this year will be his lovely wife, Joanne. Throughout his career she has been a constant source of encouragement and understanding. Her most noted signs of professional support were when she served as the president of the Memphis-Shelby County Medical Society Auxiliary and as treasurer of the Tennessee Medical Association Auxiliary. Allen and Joanne are the very proud parents of three boys: Tom, Bill, and John.

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APRIL, 1981

Whether or not there is an epidemic of cancer in this country, there is an epidemic of hysteria about the subject. On the surface it would seem it should be easy to find out what it is that harms us. But the fact is that although there are some passable animal models to work on, mice are not men. To really be sure we have a carcinogen requires either an epidemiologic or experimental study carried out in such a way that all of the variables but one are constant, and that the experimental and the control groups are comparable. Since we are pretty much forbidden by ethics, if not by law, from deliberately giving people cancer, we are stuck with an epidemiologic approach.

It is a sad fact that we do not know much about what actually causes cancer. We do know from experience though that people would rather derogate and regulate industry or the environment generally than take the steps necessary to regulate their own personal environment. I will give you just two examples.

We do not *know* that smoking causes lung cancer, but what we do know is that smoking is a co-carcinogen with all sorts of things. Take asbestos, for instance. Soluble microfibrils of asbestos get inside the cells — can be demonstrated there by electron microscopy — and somehow apparently alter their metabolism in such a way as to cause the formerly normal cells to produce a cancer. Asbestos-induced cancer of the lung is nearly 20 times as frequent in smokers as in nonsmokers. In this sense, smoking can be said to cause lung cancer. This is in addition to all the other things smoking is known to do to us all by itself.

Cancer of the cervix is related epidemiologically to low socioeconomic status, age of onset of sexual activity, and multiplicity of sexual partners. Virgins never, or at least almost never, get cancer of the cervix. Richart believes the evidence indicates carcinoma of the cervix is due almost exclusively to infection by the wart virus, which is sexually transmitted. The implication is that the best preventive for cancer of the cervix is a monogamous sex life.

The most important negative factor in this aspect of cancer control is cancer's long latent period. Do you think folks are going to be frightened into not smoking? Do you think they are going to stop fooling around just because some day they might — or their wife or girl friend might — get cancer? Be serious!

It is a lot less traumatic to consider disposal of

editorials

For Cancer Control Try Self-Control

Since April is Cancer Control Month, I thought maybe I should do something to help control cancer. On the other hand, sometimes it seems we are doing too much of that already — not too much controlling, but too much doing. Perhaps what we could do to help the most would be cancel all our so-called control measures and start over with a rational, systematic plan, unlike the non-plan, the nonsensical hodge-podge, we have today.

chemical wastes or leaks at nuclear plants, and so on. Since we feel we must do something, let's do that. Let's remove the asbestos instead of the cigarettes. The immediate effects of withdrawal are not nearly so threatening. This is not to say all those other things are not important, or that their solutions will not produce dislocations. But for a hysterical Congress to pass a law—the Delaney Amendment—withdrawing any substance (e.g., saccharin) from general use that gives any indication it might cause cancer in animals becomes ridiculous in the extreme, given the unwillingness of mankind to do what it already knows it can do to prevent cancer.

On second thought, I think I *won't* do anything about helping control cancer. Cancer control first requires *self*-control—and who wants it? You've come a long way, baby!

J.B.T.

The Pit and the Pendulum

Over the years I have accumulated an assortment of editorial rejects—half-written editorials that never quite jelled, and so were put back into the file for future reference. In periods of drought I sometimes look back through them in hopes I can dredge up something worthwhile. I seldom can—you know the old saying about the silk purse and the sow's ear. But I couldn't help noting how many of them addressed in one way or another a question all of us need to contemplate every once in a while. It is, "What am I doing here?"

Now that question can be construed in two ways. The first is, "How did I get where I am?" The second, "What am I doing now that I'm here?" Your answer to the second is bound to depend a lot on what you believe about the first.

All of us arrived at our present station through a series of events beginning in the unremembered—unrememberable—past. You can start it anywhere you like. The courts have pretty much decided your life began when you exited your mother's womb. If you start there, then your environment is all-important. That varies from kings to commoners, and for us commoners it varies a lot too. It gives one pause to think of all our temporal influences—good, not so good, and downright bad.

Others of us think life begins when the head of a sperm enters an ovum and mixes the genetic material of two unique individuals, forming a

third just as unique. Each of the parents, and therefore each zygote, contains genetic material from two other unique individuals, and so on back for unnumbered generations. Enter our genetic heritage. In addition to our environment, each of us is the product of our parents, our grandparents, our great-grandparents, and so on.

Back to where? That question is all important for answering the second part of the question, "What am I doing here?" From it derives our responsibility or lack of it, our ultimate response to the question of, "How would you act if society put no brakes on you?"

We are either accidents or we are not. There is a vast body of scientific, or not so scientific, theory presently going around about the bubbling brie exuding methane and so on which a spark ignited to fashion the first amino acids, which then fell together a few eons thence to make a genetic chain, which then scrambled about to find a mate and make a cell, and so on until now you just happen to find yourself on the other end of a soupy mess. I suppose if you take that approach you have to look hard to find something to believe in.

I hate to push your mind through a sieve, but if you think it all an accident, where did the soup come from—and the spark? They were just out there? Out where? Where did "there" come from? Who made it? Nobody? It just happened? You can see what you get into when you go at it from that approach. The "accidentalists" would say that "God" is simply an easy out for those who refuse to bend their minds to the task of figuring out how it all came about. Perhaps. I'll *let* them figure it out.

If one assumes God as the source, one immediately become accountable. The "atheist" (that is in quotes because even the atheist believes in something—his god is Chance) feels his responsibility is ultimately only to himself, and his actions need only be out of self-interest. Now I certainly do not wish to imply that the "good" are all lined up on God's side and vice versa. Although self-interest may be purely hedonistic or even criminal, it is frequently enlightened, and those who act out of enlightened self-interest show great responsibility toward society. It helps them function with satisfaction and gives them a good environment in which to live and ply their trade. They often are easier to live with than many who are "on God's side" (some of whom also act out of enlightened, or even unenlightened, self-interest).

I saw a little prayer the other day which said, "Lord, make all the bad people good, and the good people easy to live with." There is a constant tension between being right and being easy to live with. The Spanish Inquisition and the Crusades are two examples of disasters visited upon humanity by God-fearing people, who were only trying to save souls, which is right and good. Cromwell's England was no place to live—and many there ceased doing so. The auto-de-fe was popular in Geneva. Certainly many things done in the name of God are not only not easy to live with; they are not even right. My natural (supernatural?) sympathies are with the Moral Majority, but as history tends to repeat itself, I can't escape a vision of Cromwell's roundheads in the saddle. The Crusades attracted all the adventurers in Europe, and the Inquisition and Cromwell, as the parties in power, attracted all the opportunists and "practical atheists" in their respective realms, compounding, if not actually causing, the problems.

Well, taking the question either way, what are *you* doing here? Considerations on the one side are of our origins; on the other, of our progeny. For the sake of our progeny we need to perceive how fine the distinction is between liberty and license, between inhibition and oppression. Discrimination between them is often difficult. I think it is clear—the election just past indicated it is clear—we have gone too far, that there is presently an excess of freedom to the point of license. There is seldom even inhibition anymore. The tendency is to allow "whatever turns you on." That just now encompasses a lot. There is a move afoot to do something about it.

If history repeats itself, the pendulum in this pit will swing too far the other way. To prevent its doing so is going to take the finest discrimination by our best and most dedicated minds. I pray they will not be misdirected, one way or the other.

J.B.T.



Robert L. Bowlin, age 87. Died February 14, 1981. Graduate of Tulane University School of Medicine. Member of Memphis-Shelby County Medical Society.

Walter L. Diveley, age 69. Died February 10, 1981. Graduate of Vanderbilt University School of Medicine. Member of the Nashville Academy of Medicine.

George G. Henson, age 76. Died January 28, 1981. Graduate of Tulane University School of Medicine. Member of the Knoxville Academy of Medicine.

George E. Paullus, age 69. Died February 18, 1981. Graduate of University of Tennessee College of Medicine. Member of Memphis-Shelby County Medical Society.

Norman Henry Rucker, age 62. Died February 4, 1981. Graduate of University of Tennessee College of Medicine. Member of Knoxville Academy of Medicine.

Edward Bartlett Smythe, age 70. Died February 4, 1981. Graduate of University of Tennessee College of Medicine. Member of Northwest Tennessee Academy of Medicine.

new members

The JOURNAL takes this opportunity to welcome these new members to the Tennessee Medical Association.

CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY

Charles R. Adcock, M.D., South Pittsburg
Robert G. Aug, M.D., Chattanooga
Jonathan Ben-Ezra, M.D., Chattanooga
Vincent James Haren, M.D., Chattanooga
Marian G. May, M.D., Chattanooga
Steven L. May, M.D., Chattanooga
Brent S. Morris, M.D., Chattanooga
John R. McGauley, Jr., M.D., Chattanooga
Maurice S. Rawlings, Jr., M.D., Chattanooga

KNOXVILLE ACADEMY OF MEDICINE

John McLain Burkhart, M.D., Knoxville
James V. Ferguson, M.D., Knoxville
Gordon S. Greeson, M.D., Knoxville
Bruce A. Smith, M.D., Knoxville

MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

James D. Acker, M.D., Memphis
James Wesley Bailey, M.D., Memphis

Timothy Lee Black, M.D., Memphis
Dinesh N. Chauhan, M.D., Memphis
Luu Huy Dang, M.D., Memphis
Prasad Subbaraya Duggirala, M.D., Memphis
Timothy Charles Fabian, M.D., Memphis
James Christian Fleming, M.D., Memphis
Tommy L. Fudge, M.D., Memphis
Manhar C. Gandhi, M.D., Memphis
Howard B. Hasen, Jr., M.D., Memphis
Sue Beth Hudson, M.D., Memphis
Patricia Sue Inman, M.D., Memphis
Sophia Haque Khandekar, M.D., Memphis
William L. Marcy, Jr., M.D., Memphis
William Lee Moffatt, III, M.D., Memphis
Mark Loyd Reed, M.D., Memphis
G. Phillip Schoettle, Jr., M.D., Memphis
James E. Turner, M.D., Memphis

NASHVILLE ACADEMY OF MEDICINE

Charles W. Daniels, M.D., Nashville
Arthur C. Fleischer, M.D., Nashville
Jeffrey S. Harris, M.D., Nashville
Annette Kyle-Vega, M.D., Brentwood
Norris S. Lewis, M.D., Nashville
William Carl Loos, M.D., Nashville
James S. Powers, M.D., Ashland City

WARREN COUNTY MEDICAL SOCIETY

David M. Bratton, M.D., McMinnville

personal news

Perry McCallen, M.D., has been named chief of staff at East Tennessee Children's Hospital in Knoxville for 1981. Other officers named include *Robert Barnes, M.D.*, vice chief of staff; and *James Wall, M.D.*, secretary.

Yashwant P. Patel, M.D., has been named chief of staff at Lincoln County Hospital in Fayetteville for 1981. Other officers named include *Sam M. Ashby, M.D.*, vice president; and *William R. Jones, M.D.*, secretary-treasurer.

Ira Pierce, M.D., Knoxville, has been elected the new Knox County medical examiner-county physician.

TMA Members Receive AMA Physician's Recognition Award

Twenty-six TMA members qualified for the AMA Physician's Recognition Award during the month of January 1981.

To qualify for the PRA, a minimum of 150 hours of continuing medical education must be earned over a three-year period; 60 of these hours must be Category 1.

This list does not include members who reside in other states. Names of additional PRA recipients will be published as they are received from AMA.

Maysoon Shocair Ali, M.D., Waverly
Subhi Dawud Suboh Ali, M.D., Waverly
Billy Jason Allen, M.D., Chattanooga
James Carl Benton, M.D., Knoxville
Bruce Barton Brown, M.D., Union City
Thomas Ray Duncan, M.D., Columbia
Terrell Carroll Estes, M.D., Bristol
Gerald Mervin Fenichel, M.D., Nashville
Walter Willis Frey, M.D., Nashville
Maurice Samuel Goldman, M.D., Cleveland
Roland William Gray, M.D., Nashville
David Lee Hudson, M.D., Murfreesboro
William Sherman Keane, M.D., Nashville
Cecil Harry Kimball, M.D., Cleveland
Roger Randall McFadden, M.D.,
 Chattanooga
Colin Max Muir, M.D., Sparta
Amos Okrah, M.D., Memphis
Phil E. Orpet, M.D., Memphis
Leslie B. Reynolds, M.D., Kingsport
James Edward Ricciardi, M.D., Maryville
Downen Ervin Snyder, M.D., Memphis
W. Chas. A. Sternbergh, M.D., Chattanooga
Mary E. Thompson Stroud, M.D.,
 Chattanooga
John B. Thomison, M.D., Nashville
Robert C. Thompson, M.D., Chattanooga
Arthur James Wilson, M.D., Memphis

national news

From the AMA's Office in Washington, D.C.

Health Budget Undergoes Surgery

Some \$4 billion of the Reagan administration's proposed \$41-billion budget cuts will be sliced from

health programs under the domain of the Department of Health and Human Services (HHS). And additional cuts in all sectors will be listed in the President's full revision of the budget for the fiscal year beginning this October — fiscal year 1982.

The cuts for health from previously projected spending levels featured \$2.7 billion in savings through consolidation of HHS categorical grant programs and a 25% rollback in the total federal contribution. A cap on federal payments for the Medicaid program would trim the U.S. budget by \$1.2 billion.

Other proposed HHS cuts included health planning, \$100 million; professional standards review organizations (PSROs), \$15 million; National Institutes of Health (NIH), \$197 million; health professions education, \$280 million; health maintenance organizations (HMOs), \$24 million; Public Health Service hospitals, \$110 million; National Health Service Corps (NHSC) scholarships, \$31 million.

All told, HHS budget authority would be reduced by \$5.2 billion and outlays by \$6.9 billion in fiscal 1982. More than \$1 billion of this represents slashes in welfare spending. For the current fiscal year that ends in October, these health programs would be trimmed by \$828 million.

The administration's block grant proposal covers a wide span of health activities, including such programs as community health centers, migrant clinics, emergency medical services, alcohol and drug abuse services, health incentive grants, venereal disease, immunizations, etc. About 40 categorical grants for health and social services currently budgeted for \$9.4 billion next fiscal year are involved.

Explaining the plan to consolidate these programs, the administration said "day to day management has developed into a bureaucratic morass of planning, regulating, and reporting at the federal, state and local levels."

A block grant approach would give the states greater flexibility and responsibility. "States could select the service delivery agency best able to provide certain services that are now provided by direct federal grantees," the budget document said. "The overall result would strengthen state governments and provide publicly financed services more effectively and at lower costs to those in need."

Legislation to carry out the plan will be sent to Congress with an effective date as of Oct. 1. The proposed funding level for fiscal 1982 is 75% of the previously budgeted estimate, or \$6.8 billion, a cut of \$2.7 billion. Because of "significant savings in program overhead and more efficient service delivery due to the elimination of overlapping service responsibilities, this funding change need not result in a reduction of services," the administration said.

Hinting at a future broad health plan proposal, presumably along the lines of "procompetition" health bills, the economic report said government regulatory efforts to date "have failed to stem the increase in

costs because they fail to affect the underlying cost-increasing bias in the health care system that results from the insulation of all parties in medical care markets from the cost consequences of their decisions. The administration will propose comprehensive legislation to remedy these market distortions."

As an interim measure, the administration said it will propose legislation to "establish a limit on the Medicaid program's unconstrained growth."

"High federal matching, excessive benefit provisions and overly generous eligibility have made the Medicaid program a very poorly managed social program that fails to provide cost-effective services to those most in need," the administration said. Eligibility errors alone are estimated to cost about \$1.2 billion a year.

The federal payment limit would be structured to cut federal expenditures \$100 million below the current base estimate and would be allowed to increase only 5% in fiscal 1982, rising thereafter with the overall rate of inflation. Federal spending would be reduced by \$1.2 billion next year, rising to \$5 billion in 1986. The administration said it believes "this degree of restraint can be achieved by states without reducing basic services for the most needy . . . No state, however, would be prevented from providing whatever additional services it deemed appropriate out of its own resources."

The economic report said the administration "will propose to end large general subsidies for the training of physicians and other health professionals. Such programs are no longer necessary in light of the growing projected supply of most health professionals. Instead, federal programs will be directly targeted on training needs of national priority."

The administration is asking only \$120 million for health professions education next year, compared with the \$400 million projected under current spending levels and the current year's budget of \$368 million.

The federal grant and loan subsidy program for HMOs would be eradicated by the administration. "After eight years of federal support, the feasibility of HMO prepaid health care delivery has been adequately demonstrated."

Legislation will be proposed to strike present "unnecessarily restrictive requirements" for federal qualifications of HMOs, making private capital available for HMO development and "obviating the need for further subsidies." No new grants or loans will be made, but HMOs now receiving support will be allowed to complete their grant period. The program would be completely phased out by 1983.

As reported earlier, the administration will not seek new scholarships for the NHSC program that sends medical teams to physician-shortage areas. At most, 6,000 NHSC people are needed now to cover health manpower shortage areas, the administration said. A

freeze on new scholarships still will allow the corps to swell to 9,000 members by 1990.

Students who currently have NHSC scholarships will be allowed to complete their training.

Earmarked for oblivion by the administration is the PSRO program "consistent with a two-year administration timetable to develop and carry out health financing reforms that encourage competition in the health sector."

"Contracts will be renewed with only those PSROs judged most effective in controlling health care costs," and some transitional funding will be allowed through 1983 to allow competing systems of health care to contract for the services of effective PSROs.

The administration said recent studies of the program show that PSROs raise national health care spending, rather than reduce it.

The PSRO program would be pared to an appropriation of \$70 million next year, from the current \$174 million, to \$67 million the following year and to zero by fiscal 1984.

The controversial health planning program, as expected, was ticketed for destruction. Planning "has not proved effective in controlling costs on a national basis, and it inhibits market forces needed to strengthen competition and provide less costly services." The certificate-of-need requirement under planning calls for a "government franchise" and inhibits free market entry, "often propping up high-cost institutions behind a government-created entry barrier."

Health planning would be phased out over two years, receiving \$58 million next year and no money by fiscal 1984. Outlays in the current year are expected to reach \$162 million.

The budget squeeze that would keep increased funding below the projected rate of inflation would hit the National Institutes of Health where the administration will seek \$3.7 billion next fiscal year, compared with the \$3.6 billion this year. The eight Public Health Service hospitals and 29 clinics would be closed down over the next four years at an estimated savings of more than \$900 million over the period. The administration said the system "is underused and actually aggravates health care costs in cities where the hospitals are located." All of the hospitals are located in areas with an excess supply of hospital beds, the report said.

No reduction is planned for the \$45.4-billion Medicare program. Other programs escaping the economy drive are the basic retirement program of Social Security; the Veterans Administration compensation programs for service disabilities and non-service-connected disability pensioners; the school lunch and breakfast programs; the Head Start program for pre-schoolers; the supplemental security income fund for the blind, elderly and disabled; and the summer youth jobs program.

Governors Offer Second Opinion

Rumbles of protest quickly built up against President Reagan's proposed health spending cuts.

The nation's governors, meeting in Washington, D. C., rejected as "not acceptable" the plan to limit federal payment to states for Medicaid costs. Utah Gov. Scott Matheson presented the White House with the governors' position that "a uniform, nationwide 5% cap on federal financial participation is not acceptable."

Under the plan, the states would have to come up with an additional \$1 billion next fiscal year to keep Medicaid services operating at their present rate in order to make up for the federal shortfall.

HHS Secretary Richard Schweiker told the governors at their annual meeting that the federal cap is needed because Medicaid "has unfortunately been out of control."

The HHS chief noted that the "cap" is designed as an interim measure until far-reaching changes can be made in the medical system designed to induce greater competition. "The only way to cut the budget is to cut the budget," he said, indicating that the administration's position is firm on the issue.

The governors adopted a resolution that they will "vigorously oppose" attempts to shift the costs of the federal budget cuts to the states. They insisted state governments must have time to adjust to the cuts and have increased flexibility in administering federal programs.

Moving against the administration current, the governors said the federal government should take over all welfare and Medicaid costs.

Only three of the 49 governors attending the conference opposed the resolution.

The administration's economic report with its list of cuts and eliminations in health and other programs was made public when the American Health Planning Association was holding its annual meeting here. The news that planning was scheduled for elimination jolted the participants.

Said Harry Cain, AHPA executive director: "The proposal to phase out quickly the health planning program is likely to cost the government—and all the consumers, providers and other payers of health care—a great deal more than the \$100 million it purports to save."

Health Planning Ineffective, Says AMA

A very strong case exists for cessation of the federal health planning program, the American Medical Association has told the Congress.

Planning has become "a network of quasi-

regulatory agencies more responsive to federal directives and concerns than to the health and medical needs of the communities purportedly served," the AMA told the Senate Appropriations Subcommittee on Health.

In a letter to subcommittee Chairman Harrison Schmitt (R-N.M.), James Sammons, M.D., AMA executive vice president, said the health planning program "has clearly done more to interfere with health care competition than to foster it." The certificate-of-need requirements "establish barriers to entry in a market for competitors and, therefore, inhibit the market from operating efficiently to allocate resources," said Dr. Sammons.

The program has had little effect in containing costs, he said. The AMA House of Delegates recently reaffirmed AMA policy calling for repeal of the Health Planning Act.

Dr. Sammons noted that the AMA is developing principles for voluntary health planning which can serve as a foundation for establishing priorities and purposes for local planning agencies.

Nominations for HHS Health Posts

President Reagan has nominated Edward Brandt, Jr., M.D., vice-chancellor for health affairs since 1977 for the University of Texas, Austin, to be HHS assistant secretary for health.

Brandt, whose nomination is subject to Senate confirmation, was supported for the HHS post by the American Medical Association, for which he currently chairs its section on medical schools. Brandt would succeed Julius Richmond, M.D., who also held the post of Public Health Service (PHS) Surgeon General.

Also reported by the White House is the appointment of C. Everett Koop, M.D., surgeon-in-chief of Children's Hospital of Philadelphia, as HHS deputy assistant secretary for health.

An additional appointment reported by the White House is the selection of Carolyne Davis, R.N., Ph.D., to head HHS' Health Care Financing Administration. Associate vice-president for academic affairs at the University of Michigan, Ann Arbor, since 1975, Davis earlier served as dean of the university's School of Nursing from 1973 to 1975.

Accompanying the White House announcement of Dr. Brandt's appointment was the statement "... it is the President's intention to see that this position is elevated to undersecretary in accordance with a reorganization plan that will be announced later." This has led to speculation that if Dr. Brandt moves up to undersecretary, Dr. Koop would become assistant secretary, and possibly, named as Surgeon General of the Public Health Service.

Catastrophic Health Plans

The administration is considering submission of a catastrophic health benefit plan to Congress later this year.

The surprise disclosure came from HHS Secretary Richard Schweiker as he opened defense of the administration's health and welfare spending cuts in testimony before the House Ways & Means Committee.

Asked whether there was any possibility of the administration suggesting extra benefits anywhere in light of the down-the-line cuts projected for health, Schweiker told the committee "we're looking frankly at a catastrophic health program." He said he didn't "have a feel" yet of what the final decision will be, but suggested that some money "set aside" for catastrophic may be factored into the administration's detailed budget.

Schweiker did not say whether a catastrophic plan would be part of the "procompetition" health legislation the administration has said it will propose. In his congressional appearance, Schweiker said "I hope later this year we will present a health care delivery model to Congress."

The administration is supporting a "consumer choice" or "procompetition" approach under which changes in the federal tax treatment of private health insurance would be designed to spur purchase of cheaper coverage with high deductibles. Competition among insurers and HMOs theoretically would drive down the cost of medical care.

announcements

CALENDAR OF MEETINGS

NATIONAL

- | | |
|----------|---|
| May 4-7 | Aerospace Medical Association — San Antonio Convention Center, San Antonio, Tex. |
| May 6-9 | Virginia Society of Ophthalmology and Otolaryngology, 62nd Annual Meeting — Cavalier Hotel, Virginia Beach, Va. |
| May 7-10 | American Association for Pediatric Ophthalmology and Strabismus — Disney World, Orlando, Fla. |
| May 8-9 | AMA Hospital Medical Staff Leadership Seminar — Hyatt Regency, Capitol Hill, Washington, D.C. |

May 8-10 American Society for Adolescent Psychiatry—New Orleans

May 10-13 American Association of Plastic Surgeons—Colonial Williamsburg, Williamsburg, Va.

May 10-13 American Lung Association—Detroit Plaza, Detroit

May 10-13 American Thoracic Society—Detroit Plaza, Detroit

May 10-14 American Urological Association—Sheraton-Boston, Boston

May 11-13 American Association for Thoracic Surgery—Hilton, Washington, D.C.

May 13-16 American College of Legal Medicine—Hotel Del Coronado, Coronado, Calif.

May 14-15 American Association of Clinical Urologists—Radisson-Muehlebach, Kansas City, Mo.

May 16-22 American Gastroenterological Association—Hilton at Rockefeller Center, New York

May 16-22 American Society for Gastrointestinal Endoscopy—Hilton, New York

May 22-24 Southeastern Dermatological Association—Mills House Hotel, Charleston, S.C.

May 27-30 American College of Sports Medicine—Sheraton Bal Harbour,

May 27-29 Miami Beach
1st International Tourette Syndrome Symposium (Gateposts Foundation)—Roosevelt Hotel, New York City

June 4-5 American Society of Transplant Surgeons—Drake Hotel, Chicago

June 7-11 American Society of Colon and Rectal Surgeons—Broadmoor, Colorado Springs, Colo.

June 11-13 Society for Vascular Surgery—Hyatt Regency Hotel, Dallas

June 16-19 Society of Nuclear Medicine—Las Vegas

June 17-19 Endocrine Society—Convention Center, Cincinnati

June 22-26 American Orthopedic Society for Sports Medicine—Hyatt Hotel, Tahoe, Nev.

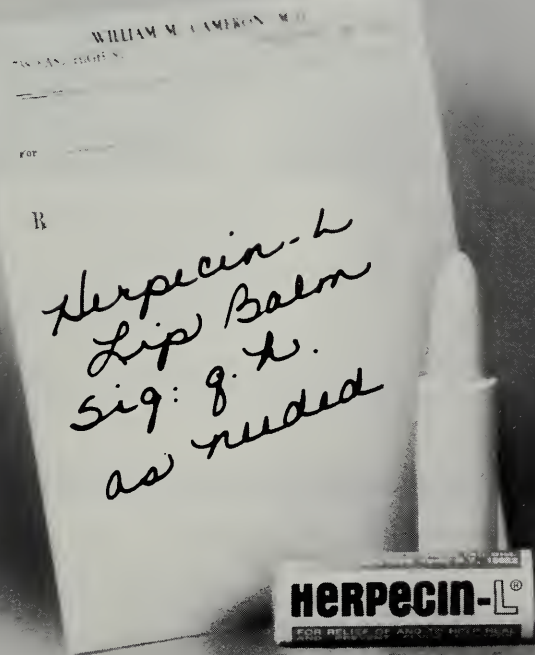
June 24-27 American Medical Electroencephalographic Association—Caesar's Tahoe Hotel, South Lake Tahoe, Calif.

July 20-25 Flying Physician's Association—Sheraton Twin Towers, Orlando, Fla.

STATE

May 28 Middle Tennessee Medical Association—Cookeville Country Club, Cookeville, Tenn.

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of penicillin V-K
therapy**



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*Data on file, Bristol Laboratories.

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INDICATIONS:

Although the principal indication for cloxacillin sodium is in the treatment of infections due to penicillinase-producing staphylococci, it may be used to initiate therapy in such patients in whom a staphylococcal infection is suspected. (See Important Note below.)

Bacteriologic studies to determine the causative organisms and their sensitivity to cloxacillin sodium should be performed.

IMPORTANT NOTE

When it is judged necessary that treatment be initiated before definitive culture and sensitivity results are known, the choice of cloxacillin sodium should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semi-synthetic penicillin.

Recent studies have reported that the percentage of staphylococcal isolates resistant to penicillin G outside the hospital is increasing, approximating the high percentage of resistant staphylococcal isolates found in the hospital. For this reason, it is recommended that a penicillinase-resistant penicillin be used as initial therapy for any suspected staphylococcal infection until culture and sensitivity results are known.

Cloxacillin sodium is a compound that acts through a mechanism similar to that of methicillin against penicillin G-resistant staphylococci. Strains of staphylococci resistant to methicillin have existed in nature and it is known that the number of these strains reported has been increasing. Such strains of staphylococci have been capable of producing serious disease, in some instances resulting in fatality. Because of this, there is concern that widespread use of the penicillinase-resistant penicillins may result in the appearance of an increasing number of staphylococcal strains which are resistant to these penicillins.

Methicillin-resistant strains are almost always resistant to all other penicillinase-resistant penicillins (cross-resistance with cephalosporin derivatives also occurs frequently). Resistance to any penicillinase-resistant penicillin should be interpreted as evidence of clinical resistance to all, in spite of the fact that minor variations in *in vitro* sensitivity may be encountered when more than one penicillinase-resistant penicillin is tested against the same strain of staphylococcus.

CONTRAINDICATIONS:

A history of a previous hypersensitivity reaction to any of the penicillins is a contraindication.

The continuing medical education accreditation program of the TMA has full approval by the Council on Medical Education of the AMA. An accredited institution or organization may designate for Category 1 credit toward the AMA Physician's Recognition Award those CME activities that meet appropriate guidelines. If you wish information as to how your hospital or society may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203.

IMPORTANT NOTICE

Published in this section are all educational opportunities which come to our attention which might be of interest to our membership. As some of these are very long, full year schedules, and others are detailed descriptions of courses, in order to conserve space, most of them will be published in only one issue of the Journal.

IN TENNESSEE

VANDERBILT UNIVERSITY SCHOOL OF MEDICINE

Clinical Training Program For Practicing Physicians

Opportunities for advanced clinical education for physicians in family practice and in various subspecialties have been developed by the School of Medicine and the Division of Continuing Education of Vanderbilt University. The practicing physician, with the guidance of the participating department chairman, can plan an individualized program of one to four weeks to meet recognized needs and interests. The experience will include contact with patients, discussion with clinical and academic faculty, conferences, ward rounds, learning individual procedures, observing new surgical techniques, and access to excellent library resources. Experience in more than one discipline may be included.

Participating Departments and Divisions

Allergy & Immunology	Samuel Marney, M.D.
Anesthesiology	Bradley E. Smith, M.D.
Cardiology	Gottlieb C. Friesinger, III, M.D.
Chest Diseases	James D. Snell, M.D.
Clinical Pharmacology	John A. Oates, M.D.
Dermatology	Lloyd King, M.D.
Diabetes	Oscar B. Crofford, M.D.
Endocrinology	David Rabin, M.D.
	David N. Orth, M.D.
Gastroenterology	Steven Schenker, M.D.
General Internal Medicine	W. Anderson Spickard, M.D.
Hematology	Sanford B. Krantz, M.D.
Infectious Diseases	Zell A. McGee, M.D.
Medicine	Grant W. Liddle, M.D.
Neurology	Gerald M. Fenichel, M.D.

Obstetrics & Gynecology	Lonnie S. Burnett, M.D.
Oncology	Robert Oldham, M.D.
Orthopedics	Paul W. Griffin, M.D.
Pathology	William H. Hartmann, M.D.
Pediatrics	David T. Karzon, M.D.
Psychiatry	Marc H. Hollender, M.D.
Radiology	A. Everette James, Jr., Sc.M., J.D., M.D.
Renal Diseases	H. Earl Ginn, M.D.
Rheumatology	John S. Sergeant, M.D.
Surgery	
Cancer Chemotherapy	Vernon H. Reynolds, M.D.
General	H. William Scott, Jr., M.D.
Neurological	William F. Meacham, M.D.
Ophthalmology	James H. Elliott, M.D.
Oral	H. David Hall, D.M.D.
Pediatric	James A. O'Neill, M.D.
Plastic	John B. Lynch, M.D.
Renal Transplantation	Robert E. Richie, M.D.
Thoracic & Cardiac	Harvey W. Bender, M.D.
Urology	Robert K. Rhamy, M.D.

Eligibility: All licensed physicians are eligible.

Administrative Fee: \$200 per week.

Credit: American Medical Association Physician's Recognition Award (Category 1) and American Academy of Family Physician's Continuing Education Accreditation.

Application: For further information and application, contact Paul B. Slaton, M.D., Director, Continuing Medical Education, Vanderbilt University Medical Center, Nashville, TN 37232, Tel. (615) 322-2716.

Continuing Education Schedule

May 8-9	Annual Update in Gynecologic Oncology, Endocrinology and Infertility and the Conrad Julian Memorial Lecture in Gynecologic Oncology (9 hours)
May 20-21	20th Annual Seminar in Psychiatry (for nonpsychiatrists) (11 hours)
May 28-30	Diagnostic Sonography Update
May 30	Symposium on Enzyme Regulation
June 8-10	Amplification for the Hearing-Impaired: Research Needs
July 16-18	3rd Annual Mountain Meeting (Internal Medicine)—Asheville, N.C. (12 hours)
July	Neurology and Speech Pathology: The Problem of Aphasia
July 22-25	4th Annual Symposium on Contemporary Clinical Neurology—Hilton Head Island, S.C. (16 hours)
Sept. 18-19	12th Annual Pediatrics Symposium: Immunology and Allergy (10 hours)
September	Blood Banking: Recent Medical and Technical Advances
Oct. 1-4	3rd Annual Medical Alumni Symposium

- Oct. 28-30 Robert M. Buchanan Lecturer in Dermatology
- Oct. 29-31 Update in Therapeutic Decision-Making (ACP Regional Meeting Scientific Sessions)
- November Annual Rhamy-Shelley Lectureship in Urology
- November Update in Anesthesiology
- Dec. 4-5 High Risk Obstetrics Seminar and the Everett M. Clayton Memorial Lecture (10 hours)

For information contact Division of Continuing Medical Education, Vanderbilt School of Medicine, Nashville, TN 37232, Tel. (615) 322-2716.

MEHARRY MEDICAL COLLEGE SCHOOL OF MEDICINE

Extended Continuing Education Program

Arrangements have been made with the following services and departments in the medical school to allow practicing physicians to participate in that service's activities for a period of one to four weeks. This program provides an opportunity for physicians to study in depth for a specified period. The schedule of activities is individualized in response to the physician's request by the participating department. The experience includes conferences, ward rounds, audiovisual materials and contact with patients, residents and faculty.

Participating Departments

Anesthesiology	Ramon S. Harris, M.D.
Family Practice	John Arradondo, M.D.
Internal Medicine	
Cardiology	John Thomas, M.D. Kermit R. Brown, M.D. Qamar A. Kahn, M.D.
Chest Disease	Joseph M. Stinson, M.D. Paul A. Talley, M.D.
Dermatology	Edward A. Mays, M.D. Thomas W. Johnson, M.D.
Gastroenterology	David Horowitz, M.D. Ludwald O. P. Perry, M.D.
General Medicine	Buntwal M. Somayaji, M.D. Edward A. Mays, M.D.
Hematology/Oncology	Robert S. Hardy, M.D.
Neurology	Calvin L. Calhoun, Sr., M.D. Gregory Samaras, M.D.
Obstetrics & Gynecology	Henry W. Foster, M.D.
Ophthalmology	Axel C. Hansen, M.D.
Orthopedics	Wallace T. Dooley, M.D.
Pathology	Louis D. Green, M.D. John C. Ashhurst, M.D.
Pediatrics	E. Perry Crump, M.D.
Surgery	
General	Louis J. Bernard, M.D.
Neurological	Charles E. Brown, M.D.
Thoracic and Cardiovascular	David B. Todd, M.D. Ira D. Thompson, M.D.
Urology	Marcelle R. Hamberg, M.D.

Fee: \$100 per week.

Credit: American Medical Association Physician's Recognition Award (Category 1). American Academy of Family Physicians Continuing Education Accredi-

tation and Continuing Education Units by Meharry Medical College.

Application: For further information contact Frank A. Perry, Sr., M.D., Director, Continuing Education, Meharry Medical College, 1005 18th Ave. North, Nashville, TN 37208, Tel. (615) 327-6235.

EAST TENNESSEE STATE UNIVERSITY Quillen-Dishner College of Medicine

May 13	Substance Abuse in East Tennessee
May 20- June 4	International Health Education Course
June 4	J. Carroll Long Lecture
June 5-6	Geriatrics II—Sexuality and the Aging
July 18	Basic Science Review III: Psychopharmacology
Aug. 15	Stress in Medical Practice
Sept. 19	Advances in Laboratory Medicine
Oct. 7-9	Infection Control
Oct. 16	Pediatrics, Prep III: Neonatology
Nov. 2-6	CPR: Faculty Inservice

For information contact Office of Continuing Medical Education, East Tennessee State University, Quillen-Dishner College of Medicine, Johnson City, TN 37614, Tel. (615) 928-6426, ext. 204.

UNIVERSITY OF TENNESSEE CENTER FOR THE HEALTH SCIENCES

Continuing Education Schedule

This comprehensive listing of UTCHS courses includes programs of the Chattanooga, Knoxville, and Memphis units. The codes (C), (K), and (M) indicate the continuing education unit handling the arrangements for a particular program.

May 7-8	(C)	Solving Problems in Drug Therapy
May 15	(M)	Cardiac Risk Factor Modification
May 27-30	(M)	Rhinoplasty
June 4-7	(C)	Family Medicine Review
June 4-8	(K)	3rd Annual Practical Otolaryngology Course for the Primary Care Physician
June 15-18	(C)	Infection in the Emergency Room
June 16-17	(M)	5th National Conference on Patient Education in the Primary Care Setting (sponsor: Dept. of Family Medicine)—Hyatt Re-

- June 22-25 (C) gency, Memphis
Diagnostic Radiology for the
Primary Care Physician —
Orlando, Fla.
- July 10-12 (M) Cardiac Emergencies —
Snowmass, Colo.
- Aug. 12-15 (C) Emergencies in Obstetrics and
Gynecology — Gatlinburg

Community-Based CME

Knoxville Campus

Blount Memorial Hospital; Maryville, Tenn.

Every Tuesday; 7-8 a.m. (1 hr. credit)

Jellico Hospital; Jellico, Tenn.

Monthly, third Tuesday; 7-9 p.m. (2 hrs. credit)

Morristown-Hamblen County Hospital; Morristown, Tenn.

Alternate months, third Tuesday; 6:30-8 p.m. (1.5 hrs. credit)

Sweetwater Community Hospital; Sweetwater, Tenn.

Monthly, second Wednesday; 12:00 noon (1 hr. credit)

Takoma Hospital; Greeneville, Tenn.

Monthly, dates vary; 6:30 p.m. (1-2 hrs. credit)

Memphis Campus

UPDATES IN MEDICINE

Carroll County Hospital; Huntingdon, Tenn.

McKenzie Memorial Hospital; McKenzie, Tenn.

Henry County Hospital; Paris, Tenn.

Monthly, third Monday; 6:15-9 p.m. (2 hrs. credit);
locations rotate.

If you would like assistance in planning a community-based CME program, contact the Associate Dean for CME and every attempt will be made to assist you through one of our three campuses.

For further information about any of these courses, please call the appropriate individuals below:

(C) Mr. LeRoy J. Pickles, Chattanooga
Tel. (615) 756-3370

(K) Mr. Jim Farris, Knoxville
Tel. (615) 971-3345

(M) Ms. Grace Wagner, Memphis
Tel. (901) 528-5547

or write or telephone:

Associate Dean for CME
University of Tennessee
College of Medicine
800 Madison Ave.
Memphis, TN 38163
Tel. (901) 528-5605

BAPTIST MEMORIAL HOSPITAL

Continuing Education Schedule

May 15-17 Anesthesiology Update

May 21-23 Emergency Room Medicine

All seminars are held in the Frank S. Groner Education Center Auditorium, Baptist Memorial Hospital, 1st floor, 20 S. Dudley, Memphis.

For further information contact Dr. Ken Burch, Director, Educational Support Services, Baptist Memorial Hospital, 899 Madison, Memphis, TN 38146; or call toll-free 1-800-542-6848 if located in Tennessee, or 1-800-238-6893 if located outside Tennessee, and ask for Educational Support Services.

IN SURROUNDING STATES

UNIVERSITY OF KENTUCKY

Mini-Residencies in Office Management Of Emotional Problems

The objective of this course is to give physicians an ideal emotional counseling technique that fits busy office practices. The technique uses a concept of emotions that is consistent with human anatomy and psycho physiology. Yet, the technique requires no more physician time or patient cost than routine evaluations of new patients. Finally, the technique is readily understandable and easy for practitioners to apply.

One, two and three week courses. Minimum of 40 hours per week. *Tuition Fee:* \$350 per week for the 1st & 2nd week of training; \$500 for 3rd week of supervised practice with patients in the Intensive RBT Treatment Program.

For further information contact Maxie C. Maulsby, Jr., M.D., Office of Continuing Medical Education, Dept. of RBT, University of Kentucky, Lexington, KY 40506.

Continuing Education Schedule

May 17-22 12th Family Medicine Review —
Session II*

May 28-30 General Pediatric Review*

June 3-5 Update in Ob-Gyn*

*Presented at Hyatt Regency Hotel, Lexington, Ky.

For information contact Frank R. Lemon, M.D., Continuing Education, College of Medicine, University of Kentucky, Lexington, KY 40536, Tel. (606) 233-5161.

NORTH ALABAMA EMERGENCY MEDICAL SERVICES AGENCY

May 20-22 Southern Regional Conference on
Emergency and Critical Care
Medicine — Huntsville Hilton/Von
Braun Civic Center, Huntsville, Ala.
Credit: 18 hours AMA Category 1,
ACEP, and AAFP. *Fee:* \$165.

For information contact Steven Hall, Box 2104,
Decatur, AL 35602, Tel. (205) 353-3800.

BOWMAN GRAY

A course in Medical Sonics, organized in eight-
week segments covering basics, neurosonology, urol-
ogy, abdomen, ob/gyn, cardiology, etc., will be of-
fered from April 21-June 12, 1981. *Credit:* 30 hours
per week in AMA Category 1.

Several one-week courses in Abdominal Real-Time
Sonography will be held on April 6-10, July 13-17,
and Aug. 10-14, 1981. *Credit:* 30 hours per week in
AMA Category 1.

A seminar in Advanced Applied Ultrasound in
Obstetrics will be held from June 18-20, 1981. *Credit:*
20 hours AMA Category 1.

For information contact Ms. Dorlee Canter, Post-
graduate Medical Sonics, Bowman Gray School of
Medicine, 300 S. Hawthorne Rd., Winston-Salem,
NC 27103, Tel. (919) 748-4505.

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UNIVERSITY OF SOUTH FLORIDA

Aug. 2-8 Advances in Diagnostic Imaging —
Hotel Scandinavia, Copenhagen,
Denmark. *Credit:* 30 hours AMA
Category 1. The following week an op-
tional mini-symposium — Nuclear
Medicine for the Diagnostitian —
offers 12 hours category 1 credit in
Stockholm, Sweden, with a side trip
planned for Helsinki, Finland.

For information contact Dr. L. R. Muroff, P.O.
Box 17241, Tampa, FL 33682, Tel. (813) 971-6000,
ext. 297.

ASSOCIATES OF OTOLARYNGOLOGY

July 31- Aug. 2 Ear, Nose & Throat Symposium for
the Family Physician — The Lodge,
Vail, Colo. (Cosponsored by the Por-
ter Memorial Hospital and Swedish
Medical Center.)

For information contact Lisa Lee, ENT Sym-
posium, 950 E. Harvard, Suite 500, Denver, CO
80210, Tel. (303) 744-1961.

DEPRESSED PATIENTS WHO ARE ALSO ANXIOUS^{1,2}

Most depressed patients are also anxious. . .

Some authors estimate that 70% of all nonpsychotic patients with symptoms of depression have concomitant symptoms of anxiety.^{1,2} One author found a distinct correlation between anxiety and depression scores in 100 nonpsychotic outpatients administered the Minnesota Multiphasic Personality Inventory in a general psychiatric clinic.³ As depression scores increased, so did anxiety scores. No attempt was made to select patients other than to exclude psychotics.

but not psychotic

The logic of treating both components of anxious depression is clear. Antipsychotics, like the phenothiazines, however, carry a well-documented risk of tardive dyskinesia.⁴ Because of this, an APA Task Force recently recommended the judicious use of phenothiazines in cases other than chronic psychosis or the use of alternative treatments.

A better way to give relief

Limbitrol combines the specific anxiolytic action of Librium® (chlordiazepoxide HCl/Roche)—a benzodiazepine with a long history of safe use—with the antidepressant action of amitriptyline, a tricyclic of established clinical efficacy. In comparison to phenothiazines, Limbitrol and its components have rarely been associated with tardive dyskinesia or other extrapyramidal side effects. And in terms of rapid response and patient compliance, Limbitrol appears to be superior to amitriptyline alone. Controlled multiclinic studies showed Limbitrol relieved more symptoms more rapidly than did amitriptyline.⁵ Despite a higher incidence of drowsiness, the dropout rate due to side effects was lower with Limbitrol. (See adverse reactions section in summary of product information on next page. As with any CNS-acting agent, patients should be cautioned about driving or using dangerous machines while on therapy with Limbitrol.)

References: 1. Rickels K: Drug treatment of anxiety, in *Psychopharmacology in the Practice of Medicine*, ed. Jarvik ME. New York, Appleton-Century-Crofts, 1977, p. 316. 2. Schatzberg AF, Cole JO: Benzodiazepines in depressive disorders. *Arch Gen Psychiatry* 35:1359-1365, 1978. 3. Claghorn J: The anxiety-depression syndrome. *Psychosomatics* 11:438-441, 1970. 4. The Task Force on Late Neurological Effects of Antipsychotic Drugs: Tardive dyskinesia, summary of a task force report of the American Psychiatric Association. *Am J Psychiatry* 137:1163-1172, 1980. 5. Feighner JP *et al*: A placebo-controlled multicenter trial of Limbitrol versus its components (amitriptyline and chlordiazepoxide) in the symptomatic treatment of depressive illness. *Psychopharmacology* 61:217-225, 1979.

Anxiety Scores

50

In moderate depression and anxiety

Limbitrol® IV

Tablets 5-12.5 each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)

Tablets 10-25 each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt)

Relief without a phenothiazine

Please see summary of product information on next page.

LIMBITROL® TABLETS Tranquilizer—Antidepressant
Before prescribing, please consult complete product information,
a summary of which follows:

Indications: Relief of moderate to severe depression associated with moderate to severe anxiety.

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use; then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction.

Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).

Usage in Pregnancy: Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies.

Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage; withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).

Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. Concomitant use with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12.

In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.

Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.

The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs:

Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.

Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.

Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extropyrindal symptoms, syncope, changes in EEG patterns.

Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.

Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.

Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.

Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.

Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female and elevation and lowering of blood sugar levels.

Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single h.s. dose may suffice for some patients. Lower dosages are recommended for the elderly. Limbitrol 10-25, initial dosage of three to four tablets daily in divided doses, increased to six tablets or decreased to two tablets daily as required. Limbitrol 5-12.5, initial dosage of three to four tablets daily in divided doses, for patients who do not tolerate higher doses.

How Supplied: White, film-coated tablets, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) and blue, film-coated tablets, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50.

Medical Care in the '80s

— A Symposium —

Edward Brandt, President Reagan's designee as Undersecretary for Health in the federal Department of Health and Human Services, will be the featured speaker at a Vanderbilt Medical Center symposium entitled "Medical Care in the '80s."

The symposium, which is free and open to the public, will be held at Vanderbilt Medical School, May 22-23.

Brandt will speak about the new administration's role in medical care, and how the federal government will approach the challenges that lie ahead.

Joseph Hutts, senior vice president of the Hospital Corporation of America, will present the results of an expansive study on HMOs which his corporation has just completed. The impact of HMOs on regular medical services is one of the points Hutts is expected to discuss.

Henry E. Simmons, M.D., a principal in Peat, Marwick, Mitchell & Company and a national consultant on medical affairs, will speak about the major forces that must be reckoned with in checking rising health care costs.

Richard Thompson, M.D., a Chicago-based educator, author, and consultant in hospital management, will present the newest concepts in quality assurance for medical care.

Tom E. Nesbitt, M.D., former president of the American Medical Association, will speak about implementing physician manpower.

The symposium will begin at 9 a.m. on Friday, May 22, as John E. Chapman, M.D., dean of Vanderbilt Medical School, delivers a welcome and introductory remarks. Between morning and afternoon presentations a free lunch will be served at the University Club on campus to all symposium registrants.

Special activities planned for Friday evening include a cocktail hour and dinner for Vanderbilt Medical School alumni. Chet Atkins will perform in Langford Auditorium following the dinner.

On Saturday, May 23, the departments within Vanderbilt Medical School will present open grand rounds. Preparations have been made to conduct special tours of the new hospital.

For additional information regarding the program contact Andrea McNiel, 615-322-2151.



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CYCLAPEN®-W (cyclacillin)

Indications

Cyclacillin has less *in vitro* activity than other drugs in the ampicillin class and its use should be confined to these indications: Treatment of the following infections:

RESPIRATORY TRACT

Tonsillitis and pharyngitis caused by Group A beta-hemolytic streptococci
 Bronchitis and pneumonia caused by *S. pneumoniae* (formerly *D. pneumoniae*)
 Otitis media caused by *S. pneumoniae* (formerly *D. pneumoniae*) and *H. influenzae*
 Acute exacerbation of chronic bronchitis caused by *H. influenzae**

*Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to *H. influenzae*.

SKIN AND SKIN STRUCTURES (integumentary) infections caused by Group A beta-hemolytic streptococci and staphylococci, non-penicillinase producers.

URINARY TRACT INFECTIONS caused by *E. coli* and *P. mirabilis*. (This drug should not be used in any *E. coli* and *P. mirabilis* infections other than urinary tract.)

NOTE: Perform cultures and susceptibility tests initially and during treatment to monitor effectiveness of therapy and susceptibility of bacteria. Therapy may be instituted prior to results of sensitivity testing.

Contraindications Contraindicated in individuals with history of an allergic reaction to penicillins.

Warnings Cyclacillin should only be prescribed for the indications listed herein.

Cyclacillin has less *in vitro* activity than other drugs of the ampicillin class. However, clinical trials demonstrated it is efficacious for recommended indications.

Serious and occasional fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin. Although anaphylaxis is more frequent following parenteral use, it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with history of sensitivity to multiple allergens. There are reports of patients with history of penicillin hypersensitivity reactions who experienced severe hypersensitivity reactions when treated with a cephalosporin. Before penicillin therapy, carefully inquire about previous hypersensitivity reactions to penicillins, cephalosporins and other allergens. If allergic reaction occurs, discontinue drug and initiate appropriate therapy. Serious anaphylactoid reactions require immediate emergency treatment with epinephrine. Oxygen, I.V. steroids, airway management, including intubation, should also be administered as indicated.

Precautions Prolonged use of antibiotics may promote overgrowth of nonsusceptible organisms. If superinfection occurs, take appropriate measures.

PREGNANCY: Pregnancy Category B. Reproduction studies performed in mice and rats at doses up to 10 times the human dose revealed no evidence of impaired fertility or harm to the fetus due to cyclacillin. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, use this drug during pregnancy only if clearly needed.

NURSING MOTHERS: It is not known whether this drug is excreted in human milk. Because many drugs are, exercise caution when cyclacillin is given to a nursing woman.

Adverse Reactions Oral cyclacillin is generally well tolerated. As with other penicillins, untoward sensitivity reactions are likely, particularly in those who previously demonstrated penicillin hypersensitivity or with history of allergy, asthma, hay fever, or urticaria. Adverse reactions reported with cyclacillin: diarrhea (in approximately 1 out of 20 patients treated), nausea and vomiting (in approximately 1 in 50), and skin rash (in approximately 1 in 60). Isolated instances of headache, dizziness, abdominal pain, vaginitis, and urticaria have been reported. (See WARNINGS) Other less frequent adverse reactions which may occur and are reported with other penicillins are anemia, thrombocytopenia, thrombocytopenic purpura, leukopenia, neutropenia and eosinophilia. These reactions are usually reversible on discontinuation of therapy.

As with other semisynthetic penicillins, SGOT elevations have been reported.

As with antibiotic therapy generally, continue treatment at least 48 to 72 hours after patient becomes asymptomatic or until bacterial eradication is evidenced. In Group A beta-hemolytic streptococcal infections, at least 10 days' treatment is recommended to guard against risk of rheumatic fever or glomerulonephritis. In chronic urinary tract infection, frequent bacteriologic and clinical appraisal is necessary during therapy and possibly for several months after. Persistent infection may require treatment for several weeks.

Cyclacillin is not indicated in children under 2 months of age.

Patients with Renal Failure Cyclacillin may be safely administered to patients with reduced renal function. Due to prolonged serum half-life, patients with various degrees of renal impairment may require change in dosage level (see DOSAGE AND ADMINISTRATION in package insert).

Dosage (Give in equally spaced doses)

INFECTION	ADULTS	CHILDREN*
Respiratory Tract		
Tonsillitis & Pharyngitis	250 mg q.i.d.	body weight < 20 kg (44 lbs) 125 mg q.i.d. body weight > 20 kg (44 lbs) 250 mg q.i.d.
Bronchitis and Pneumonia		
Mild or Moderate Infections	250 mg q.i.d.	50 mg/kg/day q.i.d.
Chronic Infections	500 mg q.i.d.	100 mg/kg/day q.i.d.
Otitis Media	250 mg to 500 mg q.i.d.†	50 to 100 mg/kg/day†
Skin & Skin Structures	250 mg to 500 mg q.i.d.†	50 to 100 mg/kg/day†
Urinary Tract	500 mg q.i.d.	100 mg/kg/day

*Dosage should not result in a dose higher than that for adults.
 †depending on severity

Colonoscopy – Clinical Relevance

BERGEIN F. OVERHOLT, M.D.

This article is one of a series sponsored by the Tennessee Society for Gastrointestinal Endoscopy dealing with gastrointestinal endoscopy and its clinical relevance for the practitioner.

History and Instrumentation

The birth of colonoscopy occurred in the early 1960s at the University of Michigan. Parallel development in the United States and Japan led to production of the current generation of flexible fiberoptic colonoscopes. These instruments vary in length according to need, from 105 to 186 cm, and allow visualization of the entire colon in 85% to 90% of cases when used by experienced endoscopists. Although the instrument's flexible shaft is only 12 to 14 mm in diameter, it houses flexible fiberoptics which provide superior image and light transmission, one or two open channels for passage of various probes (biopsy, cytology, polypectomy, etc.), a channel for insufflation of air, CO₂, or water to distend the colon lumen or wash off the instrument tip, and control wires allowing four-way tip control.

Preparation

Essential to colonoscopy is a well-prepared patient and colon. Generally 48 hours of clear liquids, laxatives 12 to 24 hours in advance, and cleansing enemas at least several hours before

the procedure produces an excellent preparation in the vast majority of patients. With proper insertion techniques and adequate sedation with meperidine (Demerol) and diazepam (Valium) minimal patient discomfort is experienced. Although amnesia is marked, the patient is able to register pain—an important warning to the endoscopist.

Facilities and Personnel

Competent, trained endoscopic assistants are essential to colonoscopy. It is likewise essential that the endoscopist be trained in the technique of colonoscopy and polypectomy in a manner fulfilling the standards of training approved by the Federation of Digestive Diseases.¹ Adequate facilities² include endoscopic equipment in a room equipped with appropriate tables, supply areas, and resuscitative equipment. Contemporary, well-maintained endoscopic equipment and accessories are considered mandatory for colonoscopy. The physician's office or hospital endoscopy area meeting these requirements are desirable locations. Proximity to radiological facilities is preferable. The formal operating room setting is less desirable as it adds additional patient cost and provides little or no advantages.

Clinical Utilization and Indications

Colonoscopy complements but does not replace the well-performed barium enema. It is generally accepted, however, that colonoscopy in experienced hands is a more reliable diagnos-

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tic procedure than the barium enema, particularly for cancers and polyps of the colon. Common indications for colonoscopy include the following:

- *Questionable abnormality on barium enema x-ray*, e.g., the question of diverticulitis or cancer.
- *X-ray diagnosis of cancer of the colon*, e.g., colonoscopy often reveals additional polyps or even a second primary malignancy.
- *Unexplained lower GI bleeding*, e.g., iron deficiency anemia with stool positive for occult blood.
- *Certain cases of inflammatory bowel disease*, e.g., for determining the extent of the disease, to clarify questionable x-rays, to evaluate treatment effectiveness or to obtain multiple biopsies.
- *Follow-up of patients with prior colon cancer resection or polypectomy*.
- *Selected cases of unexplained colonic symptoms*.
- *Colon polyp(s)*.

Most small and large pedunculated polyps can be removed through the colonoscope, a safer and less costly procedure than surgical removal. Small sessile polyps can be safely removed but clinical judgment is necessary for the sessile lesion 3 cm or larger as surgical removal may be safer; in addition, a large proportion of these lesions harbor malignancies. It is interesting and important to note that 40% to 50% of patients with one polyp will have at least one additional polyp elsewhere in the colon. Current opinion favors removal of most polyps 1 cm or more in size due to their relatively high incidence of malignancy.

Contraindications

Specific contraindications include acute illness, for example myocardial infarction, severe

pneumonia or peritonitis. Patients with severe fulminant ulcerative colitis or granulomatous colitis should not be colonoscoped because of the potential for precipitating toxic megacolon. Acute diverticulitis with fever is considered by some as a contraindication as is severe ischemic bowel disease or severe radiation colitis. Pregnancy is a relative contraindication. The uncooperative patient should not be colonoscoped. And of course an inadequately trained endoscopist should never perform colonoscopy.

Complications

Serious complications, including perforation and hemorrhage, are rare when colonoscopy is performed by the experienced, trained endoscopist. One large survey in 1972-1973 by the American Society for Gastrointestinal Endoscopy revealed hemorrhage in 0.9% of diagnostic procedures and 1.7% of polypectomy cases. Perforation occurred in 0.2% of diagnostic colonoscopy and 0.32% of polypectomy cases. As experience is gained, complications decrease.

Summary

Colonoscopy allows visualization of the entire colon in 90% or more of cases in the hands of an experienced, trained endoscopist. Although limitations do indeed exist, this procedure has totally revolutionized the diagnosis and management of diseases of the colon and rectum. All physicians should be aware of this important technique as significant benefits for patient care are available through colonoscopy. 

REFERENCES

1. *Guidelines for Training in Endoscopy*. Federation of Digestive Disease Societies, Inc, 1979. (Amer. Society for Gastrointestinal Endoscopy, 6 Beacon St, Suite 620, Boston, MA 02108.)
2. *Guidelines for the Establishment of a Gastrointestinal Endoscopy Area in Hospitals and Private Offices*, 1980. (Amer. Society for Gastrointestinal Endoscopy, 6 Beacon St, Suite 620, Boston, MA 02108.)

Fertility Trends in Tennessee

Age- and Race-Specific Fertility Analysis 1970-1978

Comparative Fertility Analysis 1975-1978

HANI K. ATRASH, M.D.; DAVID T. ALLEN, M.D.; and ROGER W. ROCHAT, M.D.

Introduction

In 1975 the Family Planning Evaluation Division (FPED) at the Center for Disease Control (CDC) did a comparative fertility analysis study for the state of Tennessee in which they estimated deviations of fertility indicators from desired levels of fertility based on national surveys of women's attitudes. That study revealed that the fertility of women 15 to 19 years old in Tennessee was 148% above the nationally desired value (128% for whites and 179% for blacks) and that the fertility of unmarried women 15 to 19 years old was 520% above the nationally desired value (500% for whites and 364% for blacks).¹

We replicated that analysis for 1976, 1977, and 1978 to determine trends in unintended childbearing. These data can be used to determine the continuing need for improvement of family planning services. It can also be used to evaluate the Tennessee Statewide Family Planning Program's increased efforts to prevent unwanted pregnancies to teenagers. To place teenage childbearing in perspective, we also examined detailed general fertility and age-specific fertility rates for the years 1970, and 1975 through 1978 to see if age-specific and race-specific fertility rates have changed over the eight years of statewide family planning programs in Tennessee.

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Materials and Methods

Population estimates for each county in Tennessee by age, race, and sex for the years 1970 to 1980, as well as the numbers of live births by age, race, county of residence and marital status of the mothers were obtained from the State Center for Health Statistics, Tennessee Department of Public Health. We computed age-specific fertility rates (ASFR) for the age groups 15 to 19, 20 to 24, 25 to 29, and 30 to 34, but not for women younger than 15 years or older than 34 years because of very small numbers of live births in these groups. Following are definitions of some terms used in the text:

(1) Birth rate =

$$\frac{\text{number of live births}}{\text{total population}} \times 1,000$$

(2) General fertility rate (GFR) =

$$\frac{\text{number of live births}}{\text{women 15 to 44 years old}} \times 1,000$$

(3) Age-specific fertility rate (ASFR) =

$$\frac{\text{number of live births for a certain age group}}{\text{number of women in that age group}} \times 1,000$$

(4) Relative rate (e.g., of ASFR in Tennessee to ASFR in the United States) =

$$\frac{\text{ASFR for a certain age group in Tennessee}}{\text{ASFR for this same age group in the U.S.}}$$

(5) Illegitimate births in Tennessee are births for which the birth certificate states that the mother is not married.

(6) Comparative fertility analysis is one whereby fertility rates in Tennessee were compared to nationally desired values of fertility rates in the United States that were calculated as a result of analysis of national fertility survey data.

The Family Planning Evaluation Division Center for Disease Control publication, *Actual vs. Desired Fertility: Estimates for Counties and Other Local Areas, Tennessee, 1975*, was used as a model to update the study to 1978 and compare results of 1978 to those of 1975.

The FPED at CDC used national fertility survey data on births to develop estimates of "desired" levels for several fertility indicators.¹ For the first time it became possible to compare a fertility indi-

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cator in a certain geographic area to a national "desired" level to determine whether a need for family planning exists. In estimating the desired levels of fertility indicators, three important assumptions were made, and these have to be kept in mind when interpreting the results of a comparative analysis. It was assumed that for each birth the woman either did, in fact, want or did not ever want that birth at the time of conception; that retrospective national fertility surveys obtain reasonably accurate assessment of women's feelings at the time of conception; and that national estimates of past unwanted fertility by race, age, marital status, and birth order can be applied at the present time to obtain useful indicators of levels of unwanted fertility, that is, race, age, birth order, and marital status specific in local areas.

For comparative analysis we used four fertility indicators: (1) ASFR for all women 15 to 19 years old, (2) ASFR for unmarried women 15 to 19 years old, (3) the percentage of marital births that are of order four or more, and (4) live births to girls younger than 15 years. Because desired values differed greatly for whites and blacks, rates for both races were calculated separately.

The desired values calculated by FPED are (1) the desired age-specific fertility rate for *all*

women 15 to 19 years is 31 per 1,000 (*whites 29 per 1,000, blacks 43 per 1,000*); (2) the desired out-of-wedlock fertility rate for *all unmarried* women 15 to 19 years old is 5 per 1,000 (*whites 2 per 1,000, blacks 22 per 1,000*); (3) the desired percentage of births of order four or more for *all married* women is 10% (*whites 9%, blacks 17%*); (4) the desired number of births to *all girls* younger than 15 years is zero (*whites zero, blacks zero*).¹

Following is an example of how the calculation of deviation from national desired values is done:

For Tennessee in 1978 the number of all women 15 to 19 years old was estimated to be 198,444 and the number of live births to all women 15 to 19 years old was 13,850; therefore, the age-specific fertility rate for all women 15 to 19 years old in Tennessee was:

$$\begin{aligned} \text{ASFR} &= \frac{\text{number of live births to all women 15 to 19}}{\text{number of all women 15 to 19}} \times 1,000 \\ &= \frac{13,850 \times 1,000}{198,444} = 70 \text{ live births/1,000 women} \end{aligned}$$

The desired value of ASFR for all women 15 to 19 years old is 31/1,000. Therefore, the numerical deviation of ASFR of all women 15 to 19 years old in Tennessee from the national desired value is $70 - 31 = 39$, and the percentage deviation is

$$\frac{39}{31} \times 100 = 126\%.$$

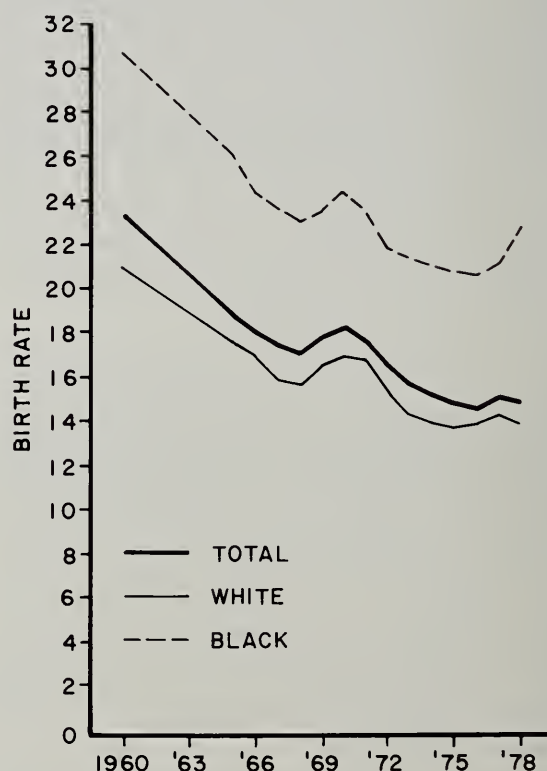
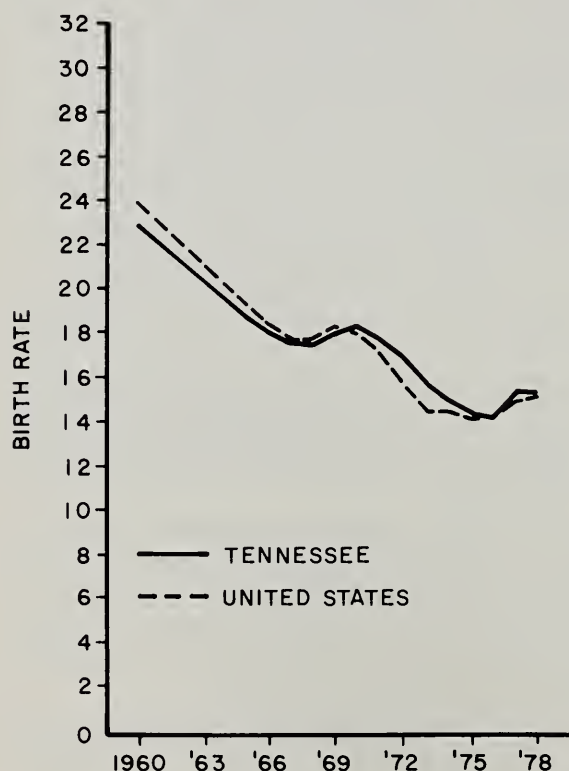


Figure 1. Changes in birth rate in the United States (total population) and Tennessee (total, white, and black) 1960-1978.

This is what we mean when we say that the percentage deviation of ASFR for all women 15 to 19 years old in Tennessee from the national desired value in 1978 was 126%.

To facilitate interpretation of our analysis, we compared rates for Tennessee with national rates and with rates in Tennessee health regions and standard metropolitan statistical areas (SMSAs).

Results

Fertility Trends and Patterns

In 1960, a total of 83,526 live births was reported in the state of Tennessee. This number dropped to 69,921 in 1968, rose in 1969, 1970, and 1971 and continuously decreased to the lowest recent level of 65,644 in 1976, then rose in 1977, and decreased again in 1978. The birth rate and the GFR had trends similar to the number of live births between 1960 and 1978.

In 1951 Tennessee had a birth rate of 25.1, which was 6.4% higher than the national value of 23.6. The drop in national birth rate has been paralleled by a drop in birth rate for Tennessee. State and national values were equal in 1965 (19.4), 1970 (18.4) and 1976 (14.8). The rise that occurred in 1969 and 1970 at the national level was paralleled by a rise in Tennessee as well. The changes in both birth rates have been very similar (Fig. 1 and Table 1) and the birth rate in Tennessee

fluctuated relative to that of the national trend, being lower for 1960-1964 and 1966-1969, but higher for 1971-1975 and after 1977. The differences were greatest in 1951 (6.4%) and in 1973 (5.3%). The birth rate in Tennessee rose in 1977 and decreased slightly in 1978. In 1976, Tennessee's birth rate was the lowest ever recorded (14.8).

The birth rates for blacks as well as whites have paralleled those of the state and the nation (Fig. 1 and Table 1), with the birth rate for blacks being 40% to 55% higher than that for whites.

The GFR in Tennessee also had a pattern similar to that of the nation. Before 1970, Tennessee had a lower GFR than the nation, while after 1970 the values for Tennessee were higher. The greatest difference of 9.2% was again in 1973. In 1975 and 1976, the values of GFR for Tennessee and the nation were the same (66.7 for 1975 and 65.8 for 1976). Again, like the birth rate, the lowest GFR values for Tennessee were recorded in 1976, followed by a rise in 1977 and a drop in 1978 (Fig. 2 and Table 1).

Blacks have always had a higher GFR than whites in Tennessee (Fig. 2 and Table 1). The difference was 53.8% in 1960, 48% in 1970, and 55.4% in 1978. The changes in GFR for both whites and blacks have followed a pattern similar to the state and the nation.

The GFR dropped only 1% between 1975 and

TABLE 1

**BIRTH RATES AND GENERAL FERTILITY RATES FOR THE UNITED STATES*
(TOTAL POPULATION) AND TENNESSEE (TOTAL, WHITE, AND BLACK
POPULATION) 1960-1978**

Year	Birth Rate				General Fertility Rate			
	USA*	Tennessee			USA*	Tennessee		
	Total	Total	White	Black	Total	Total	White	Black
1960	23.7	22.9	21.3	31.1	118.0	112.8	104.1	160.0
1965	19.4	19.4	17.9	27.2	96.3	93.6	83.0	128.0
1966	18.4	18.2	16.9	24.6	90.8	87.8	78.2	115.2
1967	17.8	17.7	16.5	23.8	87.2	86.0	76.8	112.3
1968	17.6	17.4	16.3	22.9	85.2	82.8	74.4	105.5
1969	17.9	17.9	16.9	23.6	86.1	86.2	77.4	108.9
1970	18.4	18.4	17.2	24.6	87.9	90.0	83.7	123.9
1971	17.2	17.8	16.7	23.6	81.8	87.2	81.0	119.7
1972	15.6	16.3	15.2	22.1	73.4	79.1	73.3	110.1
1973	14.9	15.7	14.5	21.9	69.2	75.6	69.6	107.1
1974	14.9	15.3	14.4	21.5	68.4	74.2	68.7	103.0
1975	14.8	14.9	13.7	20.9	66.7	66.7	61.9	91.8
1976	14.8	14.8	13.7	20.8	65.8	65.8	61.1	89.8
1977	15.4	15.6	14.4	22.0	67.8	68.8	64.2	93.2
1978	15.3	15.4	14.0	23.2	66.4	67.4	61.9	96.2

*Source: Facts of Life and Death, US Government Printing Office, 1978.

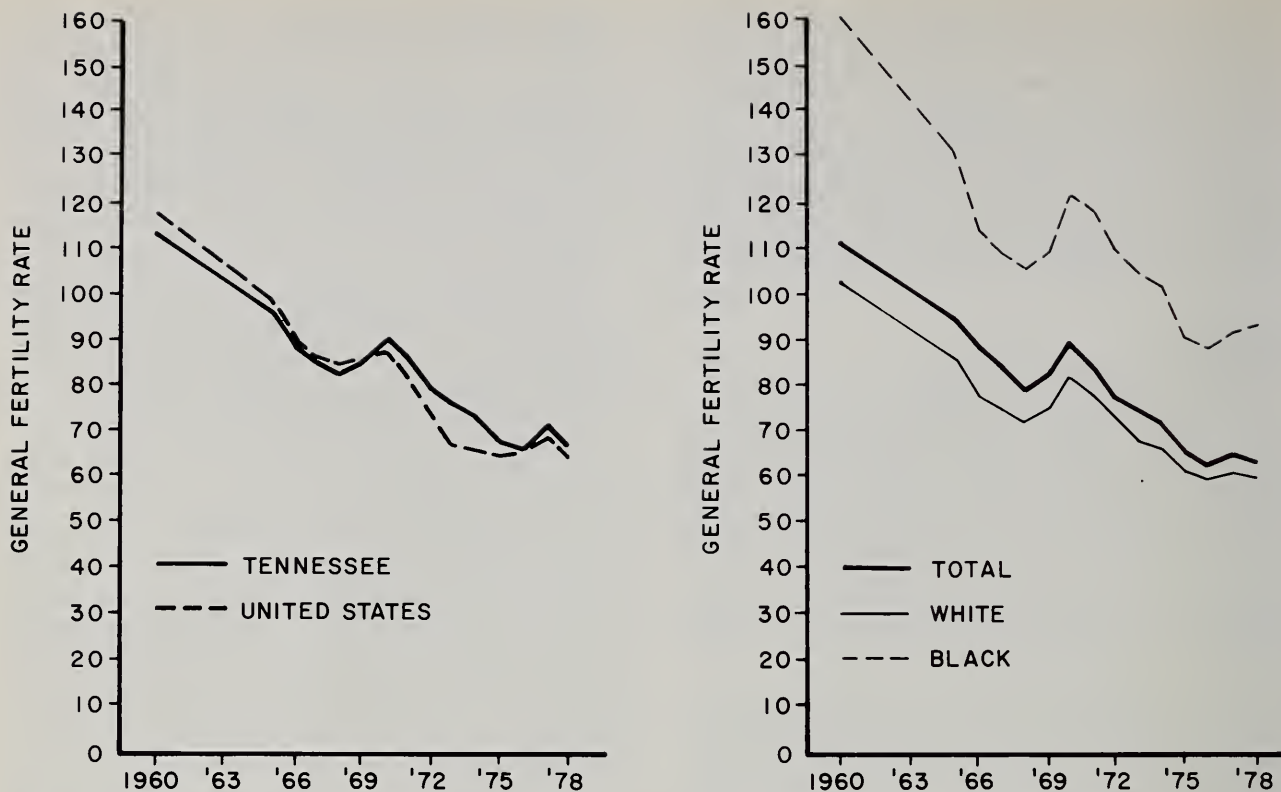


Figure 2. Changes in general fertility rate in the United States (total population) and in Tennessee (total, white, and black) 1960-1978.

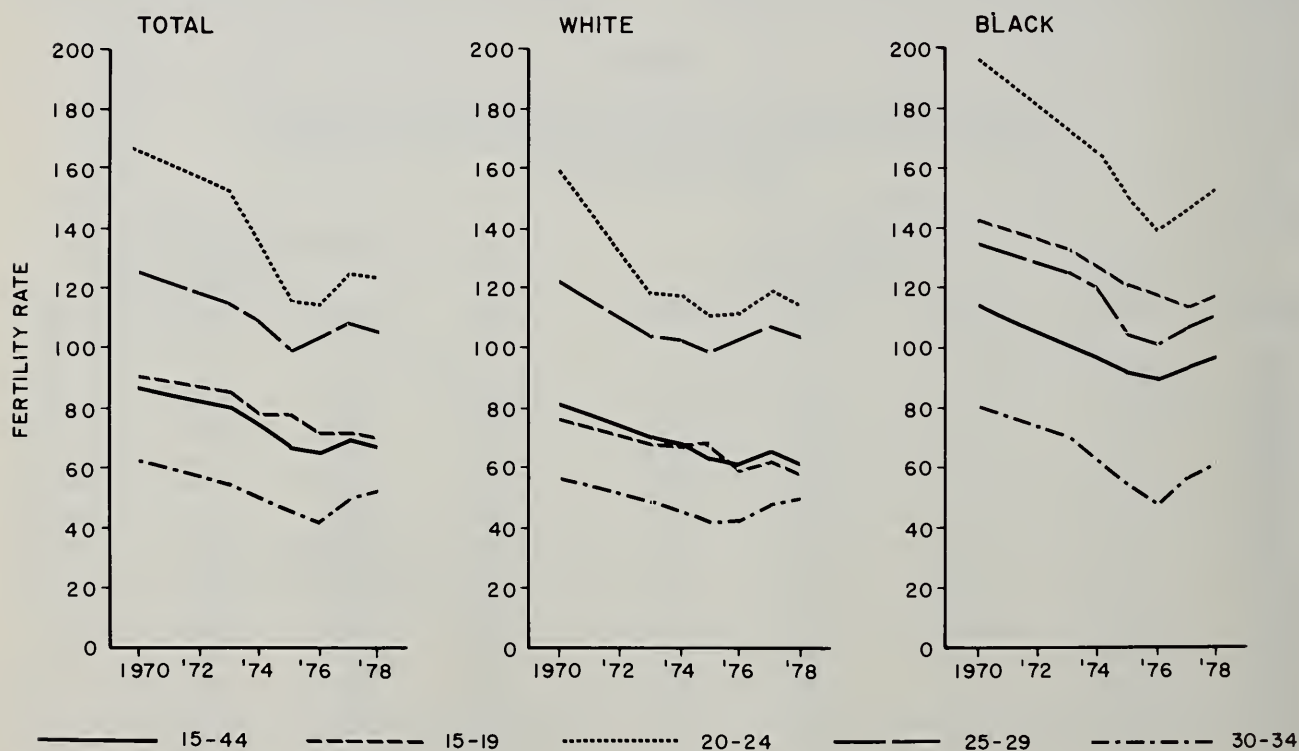


Figure 3. Changes in general fertility rate and age-specific fertility rates for women aged 15 to 19, 20 to 24, 25 to 29, and 30 to 34, by race, Tennessee, 1970-1978.

1978. However, fertility trends differed for different age groups. Different trends were also noted for different geographic areas (health regions and SMSAs).

Between 1970 and 1975, the fertility of women 15 to 19, 20 to 24, 25 to 29, and 30 to 34 decreased by 12%, 29%, 21%, and 30%, respectively.

However, between 1975 and 1978, the teenagers 15 to 19 experienced a 9% decline in fertility, while women 20 to 24, 25 to 29, and 30 to 34 experienced increases of 4%, 6%, and 14%, respectively. When studied separately, race-specific trends were similar for 1970-1975 and 1975-1978 (Fig. 3 and Table 2).

TABLE 2

GENERAL FERTILITY RATE (GFR) AND AGE-SPECIFIC FERTILITY RATE (ASFR) FOR THE AGE GROUPS 15-19, 20-24, 25-29, AND 30-34, FOR THE YEARS 1970, 1975, and 1978; AND THE PERCENTAGE INCREASE (+) OR DECREASE (-) FOR EACH OF THE ABOVE FOR THE PERIODS 1970-1975 AND 1975-1978, FOR TOTAL, WHITE, AND BLACK POPULATIONS IN TENNESSEE

	Total					White					Black				
	GFR or ASFR			% Change		GFR or ASFR			% Change		GFR or ASFR			% Change	
	1970	1975	1978	to 1975	to 1978	1970	1975	1978	to 1975	to 1978	1970	1975	1978	to 1975	to 1978
GFR	86	67	67	-22	0	80	62	62	-22	0	117	92	96	-21	+4
ASFR (15-19 yrs)	88	77	70	-12	-9	75	66	58	-12	-12	144	120	118	-17	-2
ASFR (20-24 yrs)	165	117	122	-29	+4	159	112	115	-30	+3	196	141	153	-28	+9
ASFR (25-29 yrs)	124	98	104	-21	+6	122	98	103	-20	+5	137	102	112	-26	+10
ASFR (30-34 yrs)	61	43	49	-30	+14	56	41	47	-28	+15	80	52	60	-35	+15



Figure 4. General fertility rates for all races, by health regions and SMSA, Tennessee, 1970, 1975, 1978.

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TABLE 3

PERCENTAGE ILLEGITIMATE OF ALL LIVE BIRTHS
IN THE UNITED STATES* (TOTAL POPULATION)
AND TENNESSEE (TOTAL, WHITE, AND BLACK
POPULATION) 1950-1978

Year	USA	Tennessee		
	Total	Total	White	Black
1950	4.0	5.8	2.1	20.6
1955	4.5	7.3	2.4	25.5
1960	5.3	8.7	2.7	29.4
1965	7.7	11.2	3.8	30.4
1966	8.4	11.3	4.0	37.2
1967	9.0	11.8	4.1	39.6
1968	9.7	11.8	4.9	39.1
1969	10.0	11.8	4.5	39.3
1970	10.7	12.5	4.6	41.5
1971	11.3	12.9	4.5	43.9
1972	12.4	14.4	5.2	47.9
1973	13.0	14.9	5.3	49.0
1974	13.2	14.9	5.4	49.3
1975	14.3	15.8	5.9	50.6
1976	14.8	16.5	6.1	53.3
1977	15.5	16.6	6.7	52.2
1978	16.3	18.2	7.4	54.0

*Source: Facts of Life and Death, US Government Printing Office, 1978.

Compared to national fertility rates for 1970 and 1978, Tennessee had a higher ASFR for women 15 to 19 (relative rate 1.3), similar fertility for women 20 to 24 (relative rate 1), but a lower fertility for women 25 to 29 and 30 to 34 (relative rate 0.9 and 0.8, respectively). This could mean that Tennessee women tend to bear children earlier and stop sooner than women in other parts of the country.

When GFR and ASFR were computed for various health regions and SMSAs, a wide range in rates was noted. For example, GFR in 1970 was 78 for metropolitan Knoxville, 85 for the upper east and south central regions, and 105 for metropolitan Nashville; in 1978 it ranged from 58 for the upper east region to 75 for the south central region and to 86 for SMSA Nashville (Fig. 4). Thus, the state value (the horizontal line in Fig. 4) represented some SMSAs and health regions with lower rates than the state, others with similar rates, and still others with higher rates. Similar variations were also noted when the same breakdown was done for the age groups 15 to 19, 20 to 24, 25 to 29, and 30 to 34, for blacks and whites, and for the years 1970, 1975, and 1978. Figure 5 is



Figure 5. Fertility rates for women aged 15 to 19 of all races, by health regions and SMSA, Tennessee, 1970, 1975, 1978.

an example of the wide range in ASFR for geographic regions. In that figure, SMSA Nashville ranked highest relative to other health regions and SMSAs for ASFR of women 15 to 19 in 1970, it ranked second lowest for 1975 and fourth lowest for 1978; the ASFR for women 15 to 19 in Nashville was much higher than the state value for 1970 but lower than the state value for both 1975 and 1978. Figure 6, on the other hand, reveals that the fertility rate of women 20 to 24 in Nashville was higher than the state value for 1970, 1975, and 1978. Nashville rated 13th, 11th, and 9th in that regard relative to other health regions and SMSAs for 1970, 1975, and 1978, respectively.

Since 1950, illegitimate births have made up an increasing percentage of all live births in Tennessee (Fig. 7 and Table 3). The percentage of all live births that were illegitimate in Tennessee is consistently higher than the national value. The biggest difference was for 1960 when Tennessee had a value of 8.7; that value was 64.2% higher than the national value of 5.3. In 1976, Tennessee had a value only 11.5% higher than the national value (16.5 compared to 14.8).

Among blacks, the percentage of all live births that are illegitimate has always been seven to ten times that of the whites. In 1978, the percentage of all live births for blacks that were illegitimate was

54.0%, while for whites it was 7.4%.

Comparative Fertility Analysis

Results of comparative fertility analysis were consistent with general and age-specific fertility analysis. Comparative fertility analysis revealed that the percentage deviation above the desired level for ASFR among women 15 to 19 dropped from 148% for 1975 to 126% for 1978 (for white women 15 to 19 it dropped from 128% to 100% and for blacks from 179% to 174%). The percentage of marital live births that are of order four or more became 10% above desired value in 1978 after being below desired value in 1975 (whites were below desired in 1975 and 11% above desired in 1978, blacks were 12% above desired in 1975 and 18% above desired in 1978).

The number of live births to girls younger than 15 years had decreased from 425 live births in 1975 to 359 in 1978 (16%). Live births to white girls younger than 15 dropped from 164 to 159 (3%), while for blacks the number of live births dropped from 261 to 200 (23%).

The percentage deviation of ASFR for unmarried women 15 to 19, on the other hand, increased from 520% to 560% above the national desired value (whites increased from 500% to 600%, blacks increased from 364% to 395%).

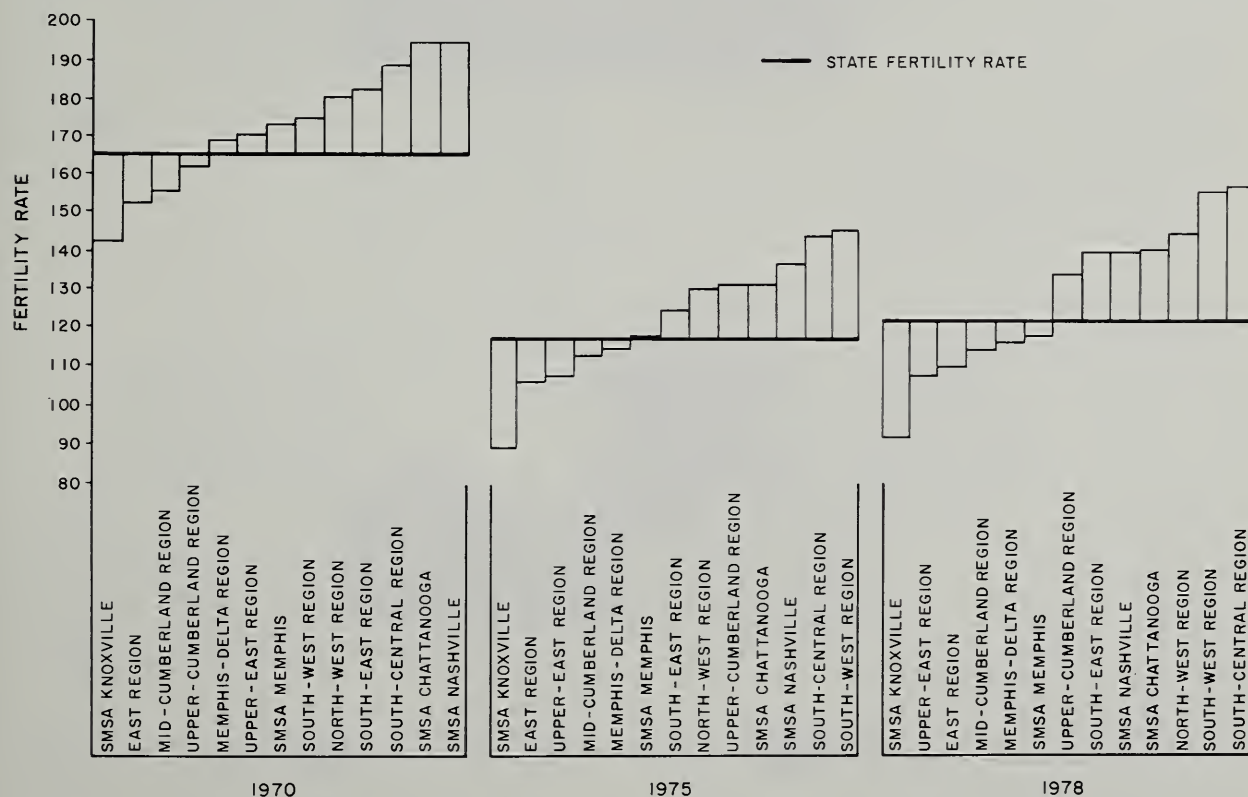


Figure 6. Fertility rates for women aged 20 to 24 of all races, by health region and SMSA, Tennessee, 1970, 1975, 1978.

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The above analysis was done for the state of Tennessee, its health regions, SMSAs and counties. Figures 8 and 9 show percentage deviations above the desired values of fertility for white and black women 15 to 19 for all health regions in 1975 and 1978. Figure 8 shows that six of the nine health regions had lower levels of unintended fertility for white women 15 to 19 in 1978. Two health regions (Mid-Cumberland and South Central) showed persistent deviation of more than 150% above desired values for white women 15 to 19. Similar changes can be seen in Figure 9, in which only two health regions show a decrease in deviation above desired values with regard to ASFR for black women 15 to 19.

Calculation of *numbers* of unwanted live births revealed that in 1978 there were 8,605 unwanted live births in Tennessee (5,350 for whites and 3,255 for blacks) compared to 9,335 in 1975 (5,915 for whites and 3,415 for blacks). Within the state, the *number* of unwanted live births was highest in the Memphis-Delta, Mid-Cumberland, and East-Tennessee Health Regions, in 1975 and 1978. The seven counties with the highest number of live births in 1975 had fewer unwanted births in 1978; Shelby County dropped from 1,980 to

1,635, Davidson County dropped from 800 to 665, Hamilton from 570 to 490, Knox from 400 to 290, Montgomery from 370 to 290, Sullivan from 240 to 140, and Madison from 175 to 125.

Discussion

It was clear from the 1975 analysis that the biggest problem facing family planning programs in Tennessee was the unwanted live births to unmarried women 15 to 19 years old for whom the percentage deviation from national desired values was 500% for whites and 364% for blacks. Efforts of the Tennessee Statewide Family Planning Program since 1975 were also directed toward eliminating or decreasing these unwanted live births. Special funds were made available to local family planning programs to be used for education of teenagers in the whole state; in Memphis and Nashville special clinics and clinic hours to suit teenagers became available after 1975, and the number of clinics for teenagers had increased to around 20 in 1978. The fertility of women 15 to 19 years old decreased 9% between 1975 and 1978, and the number of live births to girls younger than 15 years decreased 16%. However, the fertility of women in all older age groups 20 to 24, 25 to 29, and 30 to 34 increased. During the same time

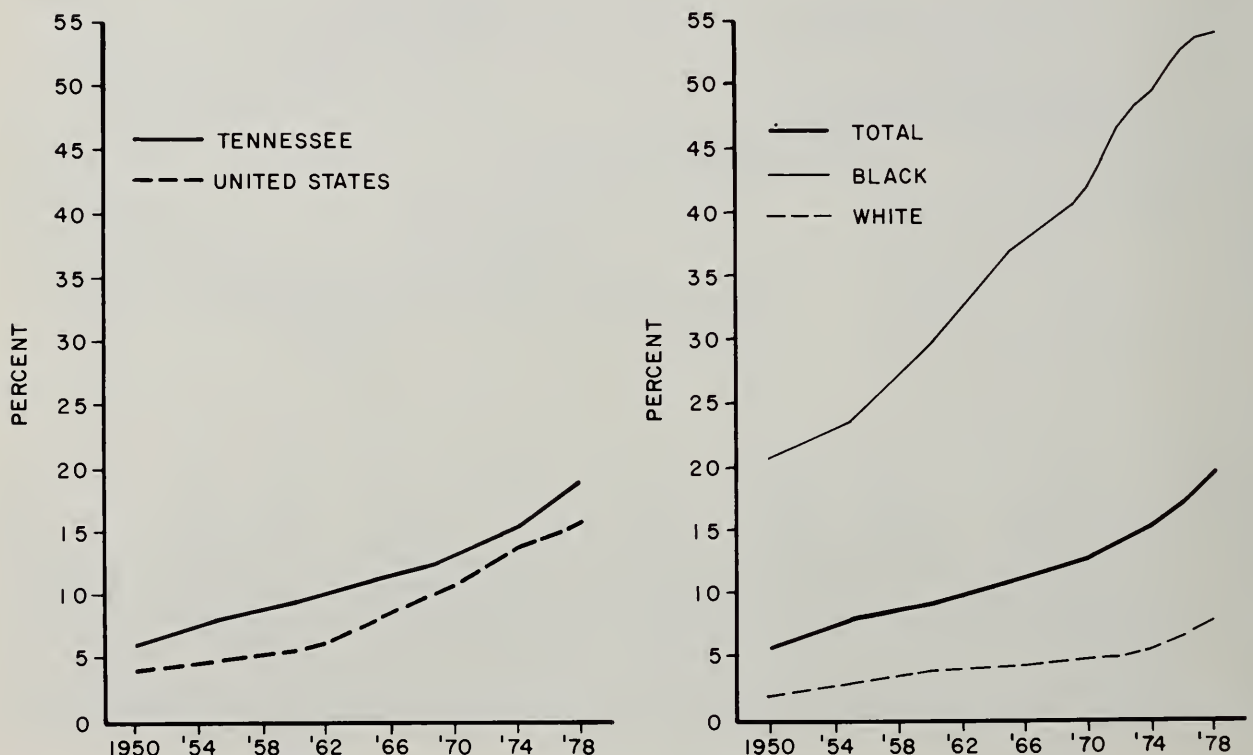


Figure 7. Percentage illegitimate of all live births, United States and Tennessee, by race, 1950-1978.

period (1975-1978), the percentage of all family planning patients who were teenagers increased from 22% in 1975 to 30% in 1978; the percentage of teenagers among all patients obtaining abortions in Tennessee dropped from 37.6% in 1975 to 34.2% in 1978, and the number of unwanted live births to teenagers dropped from 8,760 in 1975 to 7,550 in 1978.

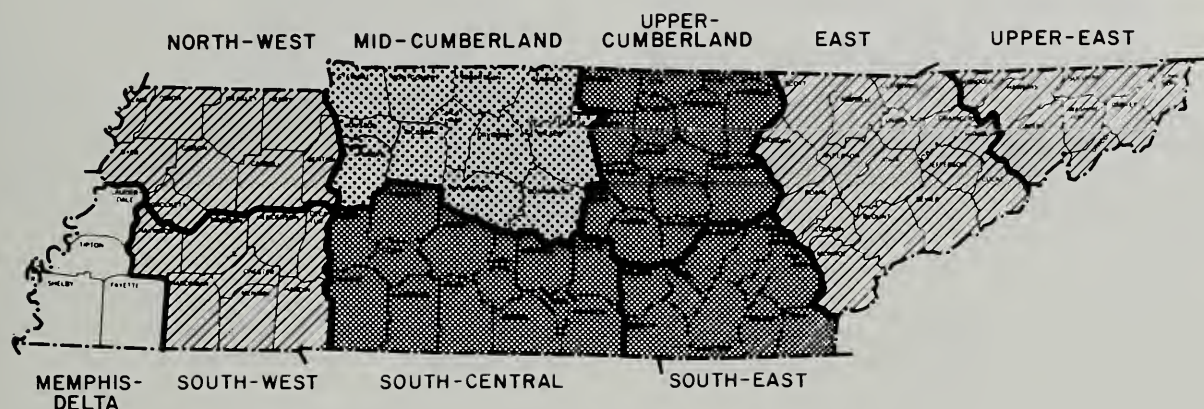
Unmarried women 15 to 19 years old, however, appear to have a bigger problem with unwanted births in 1978 than in 1975. The percentage deviation of ASFR for unmarried women 15 to 19 years old increased from 520% to 560% between 1975 and 1978 (from 500% to 600% for whites and from 364% to 395% for blacks). The percentage of illegitimate births among all live births to females 15 to 19 increased from 34% to 40% between 1975 and 1978 (from 14% to 20% for

whites, and from 76% to 84% for blacks). Although teenagers constituted a smaller proportion of patients obtaining abortions in Tennessee in 1978 as compared to 1975, the *number* of teenagers obtaining abortions increased 55.1% from 4,170 in 1975 to 6,460 in 1978.² If we assume that all induced abortions are "unwanted" pregnancies and that a woman has no more than one abortion per year, then we can add this to the unwanted live births to women 15 to 19 years. We find that there was an apparent *increase* in the number of unwanted pregnancies between 1975 and 1978 to women 15 to 19 years old.

Unwanted Live Births + Abortions = Unwanted Pregnancies

1975	8,760	+	4,170	=	12,930
1978	7,550	+	6,460	=	14,010

1975



1978

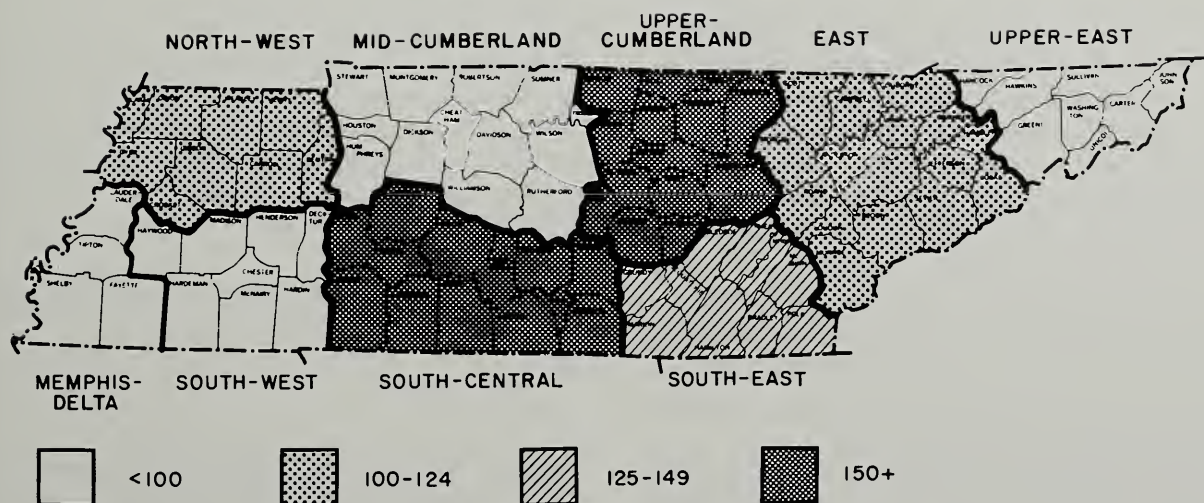
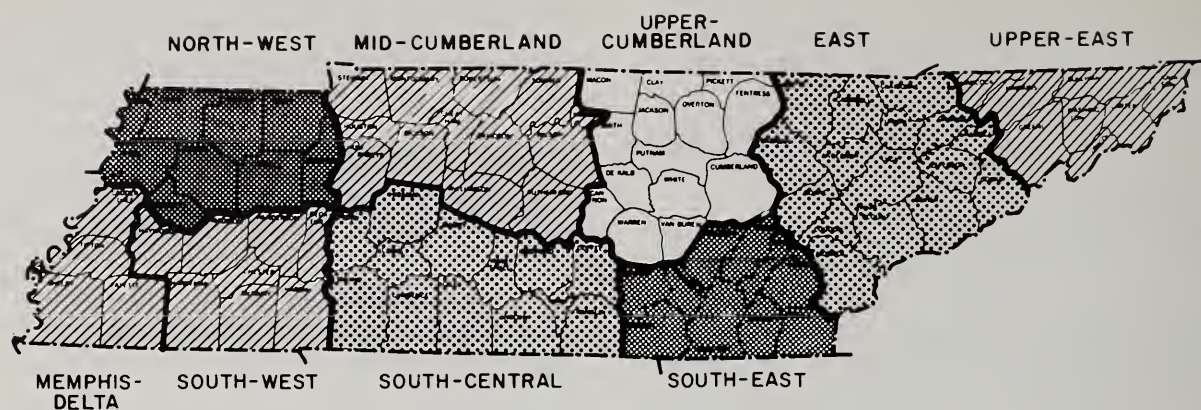


Figure 8. Deviation above desired age-specific fertility rate for white women 15 to 19 years old, by health region, Tennessee. (Deviation of actual fertility above desired fertility, expressed as a percentage of desired fertility.)

1975



1978

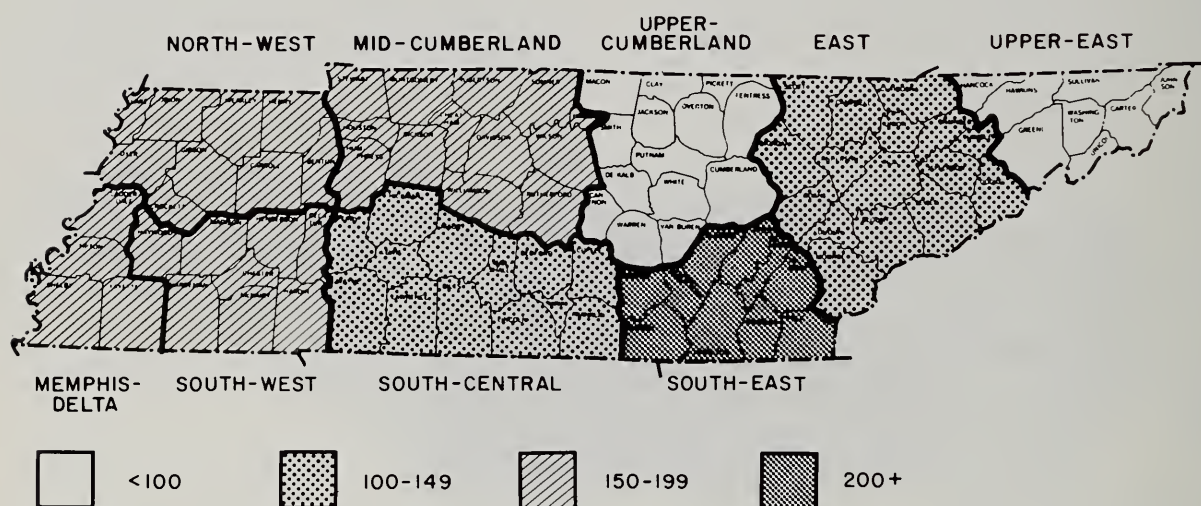


Figure 9. Deviation above desired age-specific fertility rate for women of black and other races 15 to 19 years old, by health region, Tennessee. (Deviation of actual fertility above desired fertility, expressed as a percentage of desired fertility.)

This increase might have been much larger if family planning facilities and efforts directed toward serving teenagers had not been available.

In summary, the trends in fertility in Tennessee showed a drop in birth rate, GFR, and ASFR for the age groups 15 to 19, 20 to 24, 25 to 29, and 30 to 34 between 1970 and 1975. However, between 1975 and 1978 the tendency was toward a decreasing ASFR for women 15 to 19 (but higher for *unmarried* women 15 to 19) and an increasing ASFR for the age groups 20 to 24, 25 to 29, and 30 to 34, with an increasing proportion of marital births that are of order four or more.

Illegitimate births in general form a substantial percentage of all live births in Tennessee (18.2% in 1978). The problem is greater for teenagers than it is for other age groups (in 1978, 40% of live

births to teenagers were illegitimate).

The new clinics for teenagers and the increasing efforts of the Tennessee Statewide Family Planning Program could have contributed to the decline in teenage fertility at a time when fertility of older age groups was increasing.

Acknowledgment:

The authors wish to acknowledge the invaluable assistance of personnel of the State Center for Health Statistics, Tennessee Department of Public Health.

REFERENCES

1. Center for Disease Control: *Actual versus Desired Fertility: Estimate for Counties and Other Local Areas, Tennessee, 1975*, issued January 1978, p 19.
2. State Center for Health Statistics, Tennessee Department of Public Health.

Cervical Cancer Screening: The Pap Smear

A Consensus Development Conference on Cervical Cancer Screening: The Pap Smear was held at the National Institutes of Health on July 23-25, 1980. The purpose of the conference was to examine the scientific basis for screening for cervical cancer and to make recommendations for the medical community and the public on the use of the Pap smear in screening for cancer of the uterine cervix. No attempt was made to provide recommendations related to screening by the Pap smear for other cancers of the female genital tract (i.e., endometrial or ovarian).

Recommendations were based on the accepted definition that screening procedures apply to healthy female populations and not to women

identified as patients undergoing gynecologic treatments.

Specific questions addressed at this conference were:

1. Does screening with a Pap smear affect the mortality from cervical cancer?
2. Is the Pap smear safe as a screening procedure?
3. On the assumption that screening is beneficial:
 - a. Should the Pap smear be used as a routine screening procedure?
 - b. If so, at what age should screening become a regular part of a woman's health evaluation? At what age is screening no longer rewarding? What is the optimal screening frequency at different ages? Should the recommendations made in response to the questions above be modified for certain high-risk or low-risk groups? If so, what are the groups and what are the modifications?
4. What critical factors are needed to insure that the procedure is reliable?
5. Following screening, what are the responsibilities of those doing the screening for follow-up, confirmation of findings, and initiation of treatment?

The members of the Consensus Development Panel included epidemiologists, pathologists, obstetricians-gynecologists, practicing physicians, health scientists, a social worker, a lawyer and consumer representatives.

As a framework for developing recommendations, the panel agreed to the following operational definitions:

- A Pap smear, developed by Dr. George N. Papanicolaou more than 50 years ago, is a cellular specimen removed from the lower female genital tract which is used in routine screening for cancer. The Pap smear for detection of *cervical* cancer should include samples of cells from

This conference was sponsored by the National Cancer Institute, the National Institute on Aging, and the National Institute of Child Health and Human Development, in conjunction with the National Center for Health Care Technology and with the assistance of the Office for Medical Applications of Research, NIH.

Members of the Consensus Development Panel were Maureen M. Henderson, M.D. (chairman), University of Washington Health Sciences Center, Seattle; Katherine F. Carson, M.D., F.A.C.O.G., San Diego; Pelayo Correa, M.D., Louisiana State University Medical Center, New Orleans; Ellen Flannery, J.D., Washington, D.C.; John K. Frost, M.D., Johns Hopkins University School of Medicine, Baltimore; Genevieve Hill, M.S.W., Atlanta University; Gerry B. Hill, M.B., Ch.B., Cross Cancer Institute, Edmonton, Alberta, Canada; George B. Hutchison, M.D., Harvard School of Public Health, Boston; Raymond H. Kaufman, M.D., Baylor College of Medicine, Houston; John J. Mikuta, M.D., University of Pennsylvania, Philadelphia; Duncan vB. Neuhauser, Ph.D., Case Western Reserve University School of Medicine, Cleveland; Kenneth L. Noller, M.D., Mayo Clinic, Rochester, Minn.; Estelle Ramey, Ph.D., Georgetown University School of Medicine, Washington, D.C.; Beverly J. Williams, M.D., University of Tennessee Center for the Health Sciences, Memphis. Ralph M. Richart, M.D., Columbia University, served as a consultant to the panel in the discussion of the presentations. Conference coordinators were Diane J. Fink, M.D., and Philip C. Prorok, Ph.D., National Cancer Institute, Bethesda, Md.

the ectocervix, transformation zone, and endocervical canal.

• In the United States, most Pap smears are obtained as part of a medical examination by a woman's physician or in the context of a health maintenance program. A cervical cancer screening program refers to the testing of large numbers of women who manifest no symptoms of pathologic changes of the female genital tract, in order to classify them as likely or unlikely to have cervical cancer or its precursors.

In 1980, the incidence estimate of invasive cervical cancer in the United States is 16,000 and the estimate of carcinoma in situ (CIS), or preinvasive cancer, is 45,000. The latest estimate of mortality in 1980 is 7,400. (Silverberg E: Cancer Statistics, 1980. *Ca-A Cancer Journal for Clinicians* 30:23-44, 1980.)

Three characteristics of a disease have been cited as requirements for making it suitable for screening. First, the disease should have serious consequences. Second, the disease must have a treatment which, when applied to the screen-detected stage of the disease, is more effective than treatment applied after symptoms have led to a diagnosis. Third, the detectable preclinical phase of the disease should have a high prevalence; otherwise, too few cases would be detected to justify the expense of a screening program. Cancer of the cervix was considered by this conference in the context of these criteria and reaffirmed as a disease highly suitable for screening.

Does screening with a Pap smear affect the mortality from cervical cancer?

Evidence suggests that there is a falling incidence of invasive squamous-cell carcinoma and a decreasing mortality from cervical carcinoma. (The majority of invasive cancers occur now in women who have *not been screened at all*, rather than in those screened too infrequently.) At the same time, carcinoma in situ is being detected with increased frequency. These trends have been noted in association with increased screening for cervical carcinoma and are probably related to early histological diagnosis of cervical neoplasia (abnormal cell growth) in verification of the results of cytological screening.

Is the Pap smear safe as a screening procedure?

There are no known adverse effects that have been ascribed to this screening technique. How-

ever, if the Pap smear is incorrectly evaluated by the laboratory, or is incorrectly responded to by the clinician, overinterpretation may result in unnecessary procedures and in possible complications. (Surgical conization for elucidation of minor changes in Pap smear cytology can occasionally result in severe hemorrhage or in an incompetent or obstructed cervix.)

On the assumption that screening is beneficial:

1. Should the Pap smear be used as a routine screening procedure?

The panel agreed that the Pap smear should be used as a routine screening procedure for cervical cancer.

2. If so,

- a. At what age is screening no longer rewarding?
- b. What is the optimal screening frequency at different ages?
- c. Should the recommendations made in response to the questions above be modified for certain high-risk or low-risk groups? If so, what are the groups and what are the modifications?

For many years, it has been the policy of health care providers in the United States to recommend annual Pap smear screening for women over age 18. It should be recognized that this policy has not been based on the results of well-designed experimental studies, because there have been no rigorous randomized trials of the impact of Pap smear screening on mortality. However, this policy has contributed to a reduction in the ill effects and mortality due to invasive cervical carcinoma. The panel carefully reviewed the data presented at the Consensus Development Conference to determine whether changes in this general screening policy should be suggested. On the basis of available scientific data and judgment, the panel made the following recommendations for screening asymptomatic females:

- Virgins need not be screened for cervical cancer. (There are some notable exceptions, such as females exposed to DES in utero, who may later develop adenocarcinomata of the cervix and vagina.)

- All females who have had sexual intercourse should be screened for cervical cancer.

- Screening should be initiated soon after the beginning of sexual activity.

- If the first smear is satisfactory and does not

indicate evidence suggestive of neoplasia, the smear should be repeated in one year. If the second smear is also satisfactory and negative, rescreening of a majority of healthy females should be repeated at regular intervals of one to three years. The decision on precisely how often to rescreen them should be made jointly by the women and their medical care providers. The panel did not agree on precisely how frequently these examinations should be repeated for healthy females of different ages. For healthy females with different assessed risks of developing cervical cancer, it was felt that, in general, the level of risk should not determine the frequency of screening. (The assessed risk of a healthy female getting cervical cancer in the future should play a part in decisions about the frequency of repeated screening only when that assessed risk is either extremely high or extremely low. Any healthy female whose risk level is assessed as being at or below the level found in the general female population is considered to have a low-risk level. Any healthy female whose risk level is assessed as being five times higher than the risk level found in the general population would be considered to have an extremely high-risk level, but application exclusively of the factors determining high risk mentioned in the text has so far not revealed any groups of healthy women with a risk level this high. However, the level of risk should be the criterion used in identifying groups of women for whom intensive and complete recruitment into screening programs is critical.)

The level of risk referred to in the above paragraph is determined by four factors, three of which are consistently identified with *higher than average* likelihood of developing cervical cancer in situ, and the fourth of which is consistently identified with *almost complete absence* of risk of developing invasive squamous-cell cervical cancer. The factors determining high risk are: first intercourse before 18 years of age; a variety of sex partners; and low socioeconomic status. The factor determining low risk is lifelong abstinence from sexual intercourse ("virgin" status).

- If two negative Pap smears are obtained after the woman reaches age 60, further screen-

ing for the detection of cervical cancer appears to be unrewarding. No assessment was made by the panel of its usefulness in the detection of vaginal, endometrial (pertaining to the lining of the uterus), or ovarian cancer.

- A female whose Pap smear reveals significant epithelial abnormality should be referred for diagnostic evaluation as described in the answer to Question Five.

- Unscreened females at risk should be recruited into the screening programs. Recruitment could be aimed at points of contact with medical care, such as neighborhood clinics, emergency rooms, venereal disease clinics, sites of immigration examinations, jails, hospitals, and all physicians' offices. Evidence suggests that education regarding cervical cancer high-risk factors would increase the use of screening.

- A randomized clinical trial to determine optimal screening intervals is not recommended.

What critical factors are needed to insure that the procedure is reliable?

Key factors affecting reliability include a proper clinical sample, high-quality laboratory evaluation, and proper communication between the cytopathologist and the clinician.

The quality of a laboratory's cytopathological technique is of prime importance to any screening program; but high quality is difficult and expensive to attain and to maintain. While certain technical points can be evaluated by federal agencies (such as the Center for Disease Control) the key factors in assuring consistently good cytopathologic practice are the qualifications and continuing education of the personnel as well as the quality assurance program of the laboratory. Quality is best assured if a laboratory meets the accreditation standards of the American Society of Cytology and the College of American Pathologists. There must be adequate staffing to maintain high quality. The standards of the American Society of Cytology (currently, a maximum work load per cytotechnologist of 12,000 cases per annum, for screening) and those recommended in the Canadian *Walton Report* (currently, three cytotechnologists per 25,000 cases per annum for screening, quality assurance, supervision, etc.) are recommended. The technical staff must be supported by adequate clerical staff and personnel proficient in cytopreparatory techniques.

Accurate and complete reporting between the cytology laboratory and the clinician is of basic

importance to proper Pap screening. Poor wording of the report and the use of laboratories at great distances from the clinician can impair proper communication. Use of numerical classification (i.e., Pap I-V) in place of diagnostic terminology is discouraged and should be abandoned in favor of acceptable, standard, clearly understood medical disease nomenclature. Neoplasia of the cervix develops as a progressive spectrum of tissue changes which terminate in lethal invasive carcinoma, with exfoliated (shed) cells showing characteristic neoplastic changes. Any specific changes detected by Pap smear screening are best stated in clear, mutually understood, diagnostic terminology. In this way, the biologic significance and recommendations for diagnostic workup and handling are reported completely and clearly to the clinician, so that the severity of the changes is understood, and the clinician has clear guidance for appropriate action.

Following a screening what are the responsibilities for follow-up, confirmation of findings, and initiation of treatment?

The panel recommends that whenever a clinician receives a Pap smear report suggestive of cervical neoplasia (dysplasia, or cellular anomalies; carcinoma in situ; invasive cancer) the patient in question must undergo thorough diagnostic evaluation. It is the responsibility of the physician, or his designated substitute, to notify the patient of the abnormal result. The objective of the diagnostic investigation is to use the simplest procedure to insure an accurate diagnosis.

Ideally, diagnostic evaluation should include colposcopic examination and biopsies of representative areas of the cervix usually including an endocervical curettage (scraping of the interior wall of the cervix). Diagnostic conization of the cervix (removal of a cone of tissue) may also be required if the location of the lesion makes colposcopy unsatisfactory, if the diagnosis from an endocervical curettage so indicates, or if the cytologic and histologic findings conflict.

Treatment of neoplastic lesions must be individualized. In certain cases, noninvasive lesions may be treated in outpatient facilities with proper

gynecologic-oncologic expertise. On the other hand, invasive cervical carcinoma requires the use of hospital facilities in addition to referral to, or consultation with, a physician with expertise in gynecologic oncology. The status of the woman who has been treated for cervical neoplasia should be closely followed.

Further Investigations

The crucial unanswered question is whether carcinoma in situ develops and progresses at different rates in women with different assessed levels of risk. The panel therefore recommends research on the rate of progression of pre-symptomatic disease in high-risk women. The panel also recommends that studies be undertaken to monitor the impact of changes in the Pap smear screening interval on the incidence and mortality rates of cervical carcinoma. Finally, it recommends that a task force be convened within five years to assess all relevant scientific data that may have accumulated since July 1980.

*Minority Opinion – Duncan Neuhauser, Ph.D.
(Economics)*

Review of the several computer-based, cost-effective decision models does not justify yearly screening unless the risk ratio for high-risk groups is at least 5.0. In the absence of such an elevated risk after two negative tests, screening intervals greater than three years could be appropriate. In my opinion, the probability that screening prolongs life ranges from .50 to .99 +. These decision models are sensitive to the lower end of this probability range only if the screening interval is long. Therefore, a randomized clinical trial does not seem justified. Computer-based models should be widely available in interactive form allowing providers and patients to vary the assumptions and consider the results. These models should be used in high school courses and in health science museums. On the surface, the controversial issue here is the frequency of screening. However, the real issue is the role of computer models in clinical decisionmaking. These powerful techniques are new to medicine, and not enough physicians are being educated in their use. This Pap smear debate will be viewed as one of the historical landmarks in this transformation in clinical reasoning. 

Physician Suicide

Introduction

Resolutions 49 and 50 (I-79), which were referred to the Board of Trustees, call upon the AMA to establish a "data repository and clearinghouse for information concerning physician suicide" and to cooperate with the American Psychiatric Association (APA) in securing data on such suicide through "a national network of volunteer psychiatrists." Board of Trustees Report V, submitted at the 1980 Annual Meeting and adopted by the House, outlined the steps necessary to accomplish these objectives: (1) Identify physician suicides and suspected suicides from AMA death records and other sources. (2) Conduct "psychological autopsies" by interview with the deceased's next of kin and other likely sources. (3) Compile and organize the data in ways that would be useful for research purposes.

The Board also indicated that three issues need to be considered as the above steps are being studied: confidentiality of information on cause of death and of data concerning the suicide in each case, appropriate approaches to family members prior to and during interviews, and the duration of the entire project.

After an assessment of available information resources and data processing capability at the AMA, and following discussions with members of the Task Force on the Impaired Physician of the American Psychiatric Association (APA) and other knowledgeable observers, it appears that a joint AMA-APA project on physician suicide would be feasible and desirable.

Nevertheless, because many of the substantive and procedural questions involved in undertaking and executing a project of this kind cannot be fully studied or even anticipated before actual operation begins, the Board of Trustees will establish a Physician Suicide Project on a pilot basis for a one-year period with a limited budget, so that greater resources are not committed un-

less and until the project's merits are demonstrated.

The pilot project will encompass physician deaths occurring in four or five states that together comprise from 15% to 20% of the U.S. physician population. The states selected for the pilot study will be from among those whose medical associations have Impaired Physician Committees or programs. Members of the APA Task Force on the Impaired Physician have been asked to serve as consultants to the project.

A description and evaluation of the project will be submitted by the Board of Trustees to the House of Delegates at the 1982 Annual Meeting.

Rationale for a Physician Suicide Project

Suicide takes an appreciable toll of the physician population. In 1968, Blachly¹ found 200 physician deaths listed as such in the obituary columns of *JAMA* over a two-year period. Later, Craig and Pitts,² looking at AMA's records of physician deaths rather than obituaries in *JAMA*, discovered the suicide rate over a five-year period to be 20% higher than Blachly's finding: 3.17% of all physician deaths vs. 2.66%. Neither study, however, attempted to go beyond "suicide" as the stated cause of death, i.e., to investigate whether deaths attributed to other causes—or where the cause was undetermined—might, in fact, also have been suicides.

If the objective of a project of this kind were merely to gain a more accurate count of such physician deaths, it might not justify a commitment of manpower and resources even on a limited basis. But a project predicated on in-depth interviews of survivors, colleagues and others promises to yield information of far greater value: it should help determine the nature and relative importance of the precursors to suicide and, by so doing, give meaningful direction to efforts aimed at prevention and treatment of the predisposing conditions.

The key to obtaining accurate, relevant information is the interview, the personally conducted

This is Board of Trustees Report V. Past House Action: A-80:50-51; I-79:216,217.

psychological autopsy. Not only can this type of survey yield more comprehensive and detailed information, but it is far superior to a mailed questionnaire in terms of response rate and accuracy. When Blachly mailed questionnaires to the next of kin of physicians listed as suicides in *JAMA*, he achieved an eventual return of only 40%. Although this rate was acceptable for some of the factors he was investigating, it was not for others, notably differences that might be attributed to specialty or to gender. For example, only one report out of nine was returned on anesthesiologist suicides, and only three of 13 on female suicides.¹

From Blachly's study, and from other investigations, probable risk factors have been identified, e.g., endogenous depression, affective disorders, chronic physical illness, alcohol and drug dependence, adverse stress in family relations and practice situations. More tenuous are those risks that relate to the make-up and specialty of the physician. For example, it is suspected that a young female physician may be in greater jeopardy for suicide than her male counterpart. Also, several studies^{1,3,4} have found that psychiatrists commit suicide at a significantly higher rate than other medical specialists, but the authors could only speculate as to the reasons.

Through the AMA Physician Suicide Project may come elucidation and explanation of such findings, and a determination of their relative importance and possible interrelationships.

Operational Features of the Pilot Study

Methods for identifying physician suicides and conducting psychological autopsies will be tested in each of the states selected. Also to be assessed are the number and nature of demands that are likely to be made on the AMA data repository for research purpose. The major areas of potential research interest should become apparent at the time of completion of the pilot project.

Suicide Identification—Four principal methods of identifying suicides and potential suicides will be utilized:

1. Selection of suicides that are labeled as such in the reports on physician deaths in AMA files. There are 25 to 30 such reports per year; this number will yield an estimated five or six definite suicides for those states involved in the pilot.

2. Selection of *possible* suicides from among total AMA death reports. This process will entail singling out physician deaths in the pilot states

that met one or more criteria, such as the following: (a) any death under age 30 not readily explained by organic disease, (b) any death attributed to gunshot wounds or hunting accident, (c) any death in a single-car traffic accident, (d) death under ambiguous circumstances, such as carbon monoxide poisoning. About 15 to 20 such deaths per year are expected to be identified for the pilot states.

3. Selection of physician deaths from any cause that occurred in the pilot states from among the last 1,000 consecutive deaths reported to the AMA. The purpose in selecting these reports is to try to ascertain whether fatalities ascribed to various "natural causes" might in fact be attributable to self-destructive behavior. An estimated 150 to 200 deaths for the pilot states are expected.

4. Selection of definite and suspected physician suicides in the pilot states from reports of coroners and medical examiners on deaths where cause has not been recorded in AMA records. There are about 300 such deaths per year nationwide. It is not possible to estimate accurately how many of these might involve suicide, or how many would come to the attention of coroners or medical examiners in the pilot states.

A fifth source of death reports might be those involving medical students in the pilot states. Although the pilot project is concerned with suicides by physicians, a test of what kind of useful information might be obtained from medical schools could result in the eventual broadening of the project to include students as well.

When the relevant death reports are secured and screened, necessary and appropriate information will be organized. An interview with the next of kin will then be sought by associates of the deceased and members of the APA Task Force on the Impaired Physician. The project will be explained at this interview. In this initial approach, useful information on the psychosocial aspects of events leading to death will be sought. Questions will cover topics such as alcohol or drug dependence, psychiatric or physical illness, recent divorce or death of spouse or child, recent disciplinary action, etc.

The next step will be psychological autopsy. The interviewers will be recommended by the APA Task Force on the Impaired Physician in each of the pilot states, and will be psychiatrists who are willing to volunteer two to three hours of

(Continued on page 359)

Idiopathic Lactic Acidosis

CHARLES E. KOSSMANN, M.D., Editor

JAMEEL AUDEH, M.D.:

A 63-year-old black man with hypertensive cardiovascular disease, adult-onset diabetes mellitus, and chronic renal disease gave a five-day history of increasing dyspnea on exertion, orthopnea, paroxysms of nocturnal dyspnea, and pedal edema.

He had a blood pressure of 220/90 mm Hg, a pulse rate of 108 regular beats per minute, and respirations of 38/min and Kussmaul in character. The rectal temperature was 97 F. He was an obese anxious black man in severe respiratory distress, with a summation cardiac gallop, jugular vein distension, rales and wheezes in the lungs, and bilateral pedal edema.

The thoracic roentgenogram displayed cardiomegaly with cephalization of pulmonary flow. The electrocardiogram showed abnormalities consistent with left ventricular hypertrophy. The hematocrit was 29%; the red blood cells were normocytic and normochromic. The pH of the urine was 5.0 and there was 3+ proteinuria. The serum sodium and potassium were 142 and 5.2 mEq/liter respectively; the bicarbonate was 4, BUN 132, glucose 401, and creatinine 18.7 mg/dl. The qualitative serum acetone was positive in a 1 to 1 dilution but negative in 1 to 2. The blood lactate level was greater than 50 mmole/liter. Arterial blood gases on room air were PO₂ 138 mm Hg and PCO₂ 15 mm Hg; the pH was 6.94.

He was begun on peritoneal dialysis in the ICU, and 12 ampules of sodium bicarbonate (5,352 mEq) were given over a period of nine hours with a subsequent rise in the blood pH to 7.07; three more ampules were needed to raise the pH to 7.20.

He was assessed to have hypertensive heart disease with congestion of the circulation, chronic renal disease with azotemia, and "idiopathic" lactic acidosis.

FRED E. HATCH, M.D.:

Lactic acidosis is now considered the most common form of acute metabolic acidosis.¹ There are few metabolic disturbances that can strike with its suddenness and devastation. Over the past two decades we have learned a good deal about lactic acid metabolism but there are still many unanswered questions.

Definitions: Biochemical and Clinical

Let's start out by considering the definition of lactic acidosis. Very simply it is a state of metabolic acidosis resulting from the accumulation of lactate in the blood. A problem with the definition arises when an attempt is made to state what lactic acid level in the blood is significant. Many authors have attempted to define lactic acidosis in terms of the concentration of blood lactate, but there is clearly no sharp demarcation between significant and insignificant levels.

Let me give you a few rules of thumb. If you have a patient in the resting state with a blood lactic acid of less than 2 mmole/liter, it is probably not abnormal. If the level is between 2 and 4 mmole/liter, it is abnormal but usually of unknown clinical significance. A value greater than 4 mmole/liter carries serious implications because it usually implies a major disturbance in lactate metabolism. When the lactic acid gets to 30 to 50 mmole/liter, as in this patient, the prognosis is grave and such patients rarely survive.

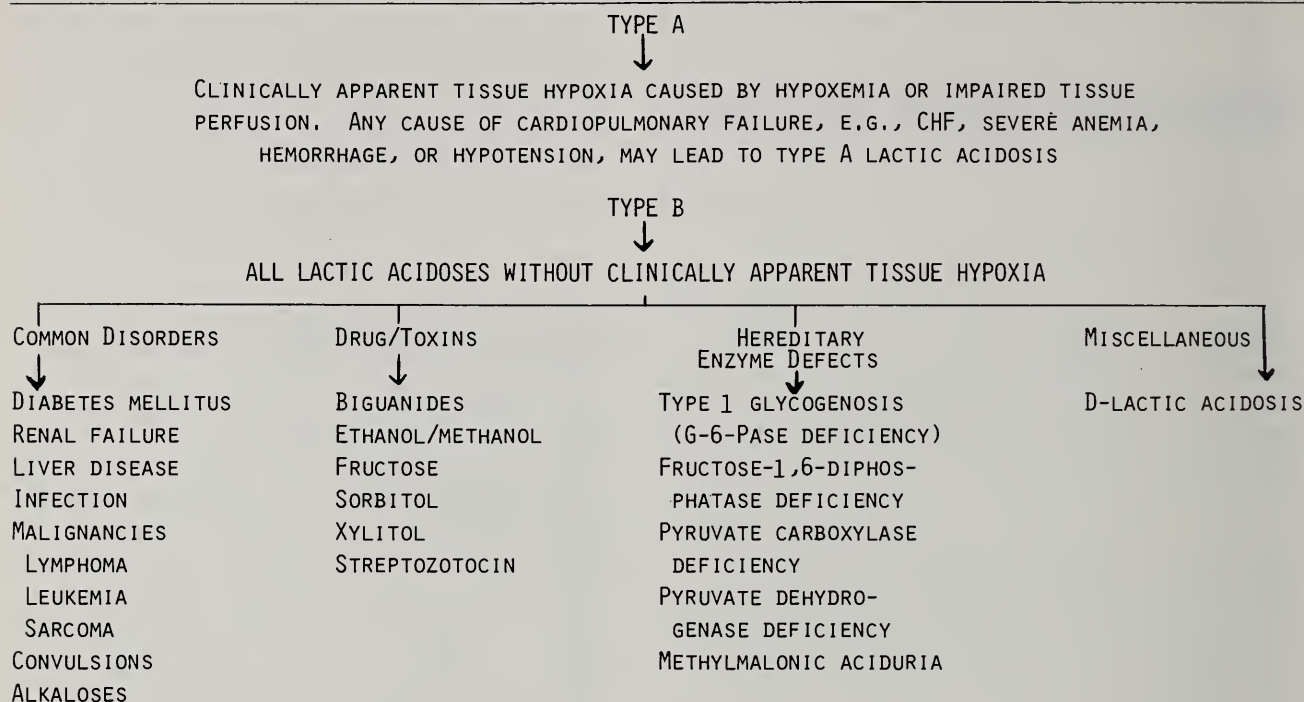
The blood level alone is one means of defining this abnormal metabolic state, but it is desirable to have in your mind a good clinical classification as well. This can be divided very easily into two types, A and B (Table 1).² Type A is the one most of us are familiar with, the typical case with lactic acid accumulating from tissue hypoxia caused by hypoxemia or impaired tissue perfusion. There are many well-known clinical examples in which there is this obvious cause of the metabolic abnormality. On the other hand, in the last few years more and more cases have been recognized in which there is no evidence of poor tissue perfusion or hypoxia; this is called type B.

There are basically three large subgroups of type B (Table 1).³ It occurs in several common disorders including diabetes mellitus, renal failure, hepatic disease, infection, malignancy, con-

From the Department of Medicine, University of Tennessee, 951 Court Ave., Memphis, TN 38163.

Presented Aug. 6, 1980.

TABLE 1
CLINICAL CLASSIFICATION OF LACTIC ACIDOSIS *



*Adapted from Cohen and Woods² (from Narins et al³).

vulsions, and alkalosis. Then there are a number of therapeutic drugs and toxins which can cause it. Finally, non-hypoxemic lactic acidosis is encountered in a group of hereditary defects.

The diagnosis made in today's patient was idiopathic lactic acidosis, which many people now do not believe exists. His acidosis probably can be categorized as type B, since he had both diabetes mellitus and renal failure, although he had signs and symptoms of congestive heart failure as well.

Lactate Metabolism

It is impossible to understand lactic acidosis without knowing something about the biochemistry and the physiology of lactate. This is much too broad a subject for us to cover in any detail today but several good reviews are included in the references. Briefly, blood levels of lactic acid are a composite of those processes which add lactate to the blood and those which remove it. If you will bear with me for a few minutes, I will try not to get too bogged down in chemistry; but if you think in terms of lactic acid metabolism involving basically three metabolic pathways, it will be fairly simple to keep in mind (Fig. 1).⁴

The major one of these pathways is *glycolysis* whereby carbohydrate is broken down into its acid product, lactic acid. This can happen under aerobic or anaerobic conditions. Don't let this chart frighten you (Fig. 1); it shows the whole glycolytic pathway but we will touch only on portions of it. Glucose is at the top of the chart and the normal (aerobic) situation (on the left) yields lactate at the bottom. The lactate that's formed in the cytosol of most tissue cells can be resynthesized by *gluconeogenesis*, specifically in the cells of the liver and kidneys, to glucose, the second pathway to keep in mind. Notice that not all the arrows are in both directions; the conversion of lactate back to glucose is achieved by enzymatic bypasses of those steps in glycolysis which are normally unidirectional (single arrows). The third pathway (lower left corner) shows the *conversion of pyruvate* by pyruvate dehydrogenase (PDH) to acetyl COA thence into the Krebs cycle where the end-products are carbon dioxide and water. This reaction occurs in the mitochondria. Pyruvate is an intermediary at the junction of several metabolic pathways; lactic acid is a dead-end product that must be disposed of. These three metabolic pathways are really the

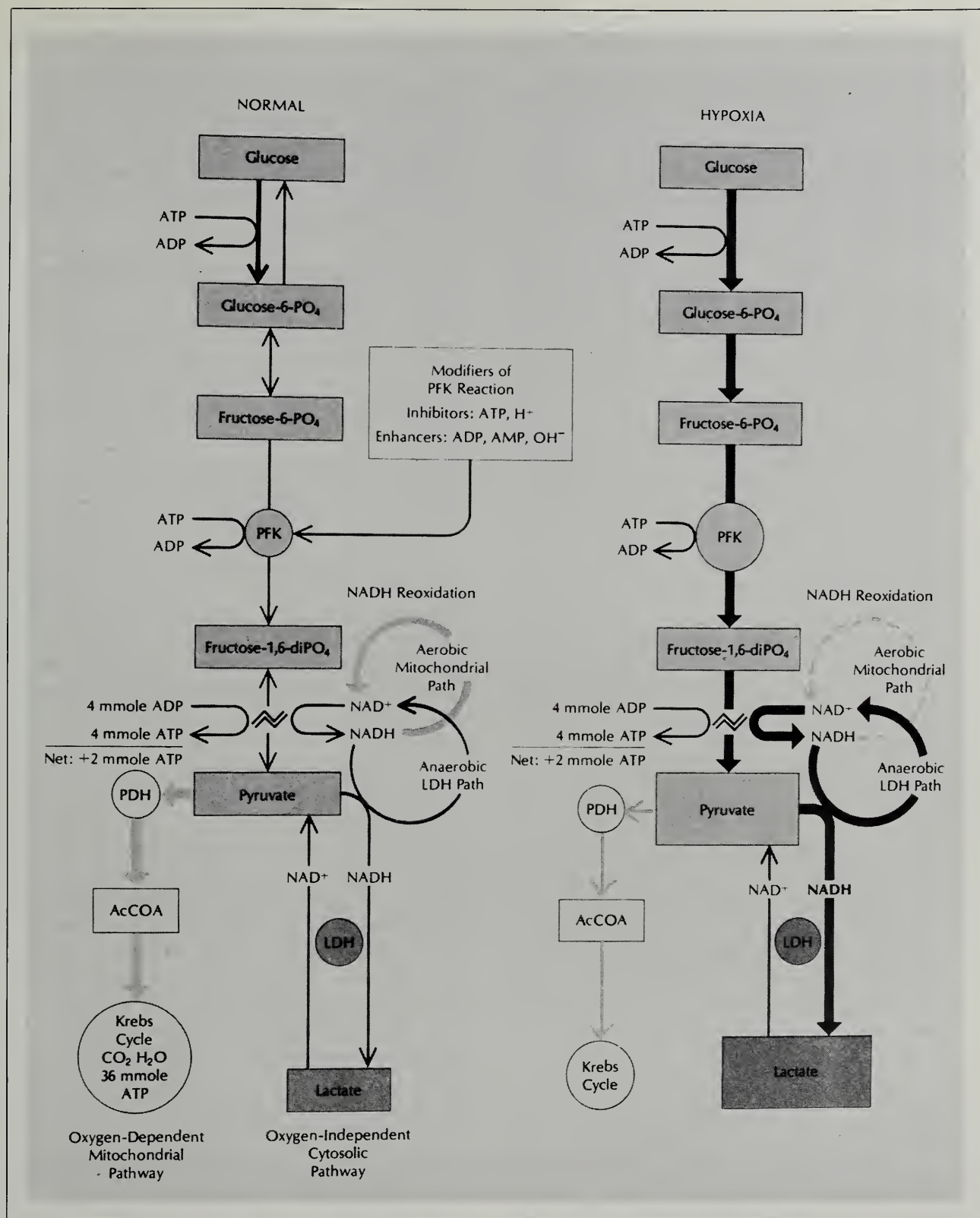


Figure 1. In the normal interplay between aerobic and anaerobic glycolysis, oxygen-dependent mitochondrial reactions rapidly reoxidize NADH, generating 36 mmole of ATP from pyruvate plus 2 mmole from glucose conversion to pyruvate. Less efficient cytosolic glycolytic reactions for ATP generation produce only 2 mmole. Lactate is the end-product of anaerobic glycolysis; under aerobic conditions it is oxidized in the Krebs cycle or used for glucose synthesis. In hypoxia, ATP depletion de-inhibits the PFK reaction, which is normally rate limiting, enhancing anaerobic glycolysis and so producing lactic acidosis (from Narins et al⁴).

only ones needed to be kept in mind when trying to understand what can happen in a patient.

The objective of glycolysis is to provide energy in the form of adenosine triphosphate (ATP) produced in the glycolytic pathway when fructose-1-6-diphosphate is converted to pyruvate, and when, in the Krebs cycle, it is converted to CO_2 and H_2O . For each millimole of glucose that's metabolized there are two millimoles of ATP generated in the first part of the pathway; in the third metabolic pathway mentioned, 36 additional millimoles of ATP are formed (Fig. 1). The generation of energy in the form of ATP is important in understanding lactate metabolism and what goes on in lactic acidosis.

Another important consideration is what happens in the mitochondria of tissue cells. The mitochondria are involved in the Krebs cycle and the oxygen-dependent mitochondrial pathway gets involved in another very important part of glycolysis, the oxidation of reduced nicotinamide adenine dinucleotide (NADH) to nicotinamide adenine dinucleotide (NAD). The latter is critical for glycolysis to go in the direction of lactate formation. Thus, the key points for aerobic glycolysis are ATP formation and NAD formation from NADH, both reactions occurring in the aerobic mitochondrial pathway.

With these relationships in mind, then, what happens when there is a decrease in oxygen supply because of decreased perfusion or of a general hypoxic state, or when drugs administered cause some interruption or impairment of mitochondrial function? For continued production of ATP and oxidation of NADH there must be a switch from this very efficient aerobic system to a much more inefficient system which is oxygen-independent. Under the conditions of hypoxia (Fig. 1, right side) you can see that three normally reversible steps in glycolysis are now irreversible (heavy arrows). The net result of anaerobic glycolysis is a decided increase in the breakdown of glucose with increase in the concentration of pyruvate, of NADH, and of the sole end-product of the anaerobic reaction, lactate. Even with this inefficient system ATP is still formed. What we might say, then, is that the formation of lactic acid is the price that the cells have to pay for stabilizing energy storage during hypoxia. These changes can all be reversed by simply restoring the arterial Po_2 , by increasing tissue perfusion, or by removing the mitochondrial poison, whatever it might be. The mito-

chondria begin to oxidize NADH and synthesize ATP efficiently, and increased amounts of NAD allow for conversion of accumulated lactate to pyruvate which, in turn, is oxidized to CO_2 and H_2O .

This basically, then, is what happens in lactic acidosis and why we end up with such a large production of lactic acid with enhanced anaerobic glycolysis.

Lactic Acidosis and Diabetes Mellitus

Most patients with diabetes in a stable metabolic state display normal lactic acid levels, but when diabetic patients become acutely ill with almost any sort of disease, from 10% to 15% of them will have elevated blood lactate.³ Many times it is 5 mmole/liter or greater, so that the diabetic state seems to lend itself to the generation of lactic acidosis. Even a modest increase of lactic acid superimposed on some other type of acidosis, such as ketoacidosis or the acidosis of renal failure, can be devastating in its effect on the pH. It is not only a common problem in diabetic patients but it can be a very serious one as well.

It's still not well understood exactly what the relationship is between diabetes and the formation of lactic acid or lactic acidosis, but it is known that at least one fourth of the cases of lactic acidosis have some form of diabetes in the background, so the association is very close.¹ When the diabetic patient gets lactic acidosis it can either be the type A related to hypoxia or the type B related to some other cause. Many of the so-called idiopathic lactic acidoses reported in the literature really fall into the type B category. As more is learned about the production and disposal of lactic acid, the term idiopathic lactic acidosis should disappear from the literature.

In explanation of what happens in diabetes, two theoretical considerations of the functions of insulin deserve mention. Among insulin's functions is facilitation of the disposal of pyruvate in the Krebs cycle, the third pathway referred to earlier. Insulin also inhibits the release of alanine, a precursor of pyruvate, from muscle.³ A lack of insulin would tend to cause the formation of more pyruvate and thus more lactate. These theoretical considerations are at least suggestive of the potential mechanisms involved.

Treatment

Since the causes of lactic acidosis are so variable, it is difficult to talk about standard therapy.

The number one consideration in therapy is identification of the cause and prompt correction of it.¹ This is even more important than treating the acidosis itself, because as long as the cause is there and as long as the lactic acid is still being formed, the patient is still vulnerable. It is important to recognize things like shock or incipient shock, sepsis, low cardiac output states, and the like, and to treat these promptly. Once the cause is found and treated the lactic acidosis will usually resolve.

The second major principle of therapy has to do with the use of alkali. Many times when the patient comes in with severe metabolic acidosis, long before the blood lactate concentration is available you can get a pretty good idea from the clinical situation and from the amount of bicarbonate that it takes to reverse the acidosis that the patient has lactic acidosis. Alkali in the form of bicarbonate is the major therapy. The quantity required is highly variable and depends on the rate of production of lactic acid. In the case presented today it took 15 ampules of bicarbonate (6,690 mEq) before the acidosis was really broken. A rule of thumb that you can use is that a low level of pH of the blood is a good indicator of an impending serious downhill course. The critical level usually given is an arterial pH below 7.20.³ The pH can be misleading because deterioration can progress so rapidly that the pH may be 7.2 at one time and just a few hours later be down to 6.9, as it was in this patient. The absolute figure of 7.2 shouldn't lull you into a false sense of security. By giving the alkali rapidly and in the amounts needed to raise the pH, you can usually tell that the acidosis is resistant, that it is requiring more alkali than the usual metabolic acidosis, and therefore is probably lactic acidosis.

It is difficult to talk of how much to give. Enough must be given to reverse the acidosis. Since the lactic acid is probably still being formed when treatment is begun, there is no way to say exactly how many ampules must be given for any specific situation.

When you have to give many ampules of bicarbonate you also give a lot of sodium and a considerable fluid volume load. Since many of the patients are in heart failure or renal failure or

both, a water overload problem is easy to produce. This complication must be avoided, either through diuretics or sometimes dialysis, to recapture the excess sodium and water while continuing to give the bicarbonate.

Another therapy recommended by some is thiamine, which augments the oxidation of pyruvate. This is desirable on a theoretical basis, although it probably does not do very much.

A couple of new things are being done with greater frequency. One is to include insulin as the basic form of therapy along with the bicarbonate. Insulin, as we have already said, stimulates the oxidation of pyruvate and has several other theoretically desirable actions. It is given in doses of 3 to 5 units hourly with glucose as needed to cover it.

Vasodilators are also being used quite a lot now if the blood volume is adequate. Nitropruside, nitroglycerine, hydralazine, and the like do increase or maintain tissue perfusion under certain circumstances and these agents are now often used when impaired perfusion is the problem.

Dichloroacetate stimulates the oxidation of pyruvate. It is still an experimental drug and I don't think it is being used very much in this country.

An old friend, methylene blue, is now abandoned. There were some fairly good theoretical grounds for using it but I don't think anyone feels it ever did very much.

This basically is the therapy for lactic acidosis. I think our patient today certainly had a lethal form. He received excellent treatment by the housestaff. His original serum lactic acid level of 50 mmole/liter is supposed to be fatal, but he came through it and did extremely well considering the seriousness of his disease. 

REFERENCES

1. Relman AS: Lactic acidosis, in Brenner BH, Stein JH (eds): *Contemporary Issues in Nephrology*, vol 2, p 65. New York, Churchill Livingstone, 1978.
2. Cohen RD, Woods HF: *Clinical and Biochemical Aspects of Lactic Acidosis*. Oxford, England, Blackwell Scientific Publications, 1976.
3. Narins RG, Rudnick MR, Bastl CP: Lactic acidosis and the elevated anion gap (II). *Hosp Practice* 15:91, June 1980.
4. Narins RG, Rudnick MR, Bastl CP: Lactic acidosis and the elevated anion gap (I). *Hosp Practice* 15:125, May 1980.

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As seen on admission



After one week of penicillin V-K therapy



Two weeks after initiation of TEGOPEN therapy

Treatment failure was judged to have occurred when lesions increased in size and/or number during the initial week of treatment with penicillin V-K. No treatment failures occurred with Tegopen.

*Data on file, Bristol Laboratories.

Brief Summary of Prescribing Information

TEGOPEN®
(cloxacillin sodium)
Capsules and Oral Solution

For complete information, consult Official Package Circular.

(12) 9/11/75

INDICATIONS:

Although the principal indication for cloxacillin sodium is in the treatment of infections due to penicillinase-producing staphylococci, it may be used to initiate therapy in such patients in whom a staphylococcal infection is suspected. (See Important Note below.)

Bacteriologic studies to determine the causative organisms and their sensitivity to cloxacillin sodium should be performed.

IMPORTANT NOTE

When it is judged necessary that treatment be initiated before definitive culture and sensitivity results are known, the choice of cloxacillin sodium should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semi-synthetic penicillin.

Recent studies have reported that the percentage of staphylococcal isolates resistant to penicillin G outside the hospital is increasing, approximating the high percentage of resistant staphylococcal isolates found in the hospital. For this reason, it is recommended that a penicillinase-resistant penicillin be used as initial therapy for any suspected staphylococcal infection until culture and sensitivity results are known.

Cloxacillin sodium is a compound that acts through a mechanism similar to that of methicillin against penicillin G-resistant staphylococci. Strains of staphylococci resistant to methicillin have existed in nature and it is known that the number of these strains reported has been increasing. Such strains of staphylococci have been capable of producing serious disease, in some instances resulting in fatality. Because of this, there is concern that widespread use of the penicillinase-resistant penicillins may result in the appearance of an increasing number of staphylococcal strains which are resistant to these penicillins.

Methicillin-resistant strains are almost always resistant to all other penicillinase-resistant penicillins (cross-resistance with cephalosporin derivatives also occurs frequently). Resistance to any penicillinase-resistant penicillin should be interpreted as evidence of clinical resistance to all, in spite of the fact that minor variations in *in vitro* sensitivity may be encountered when more than one penicillinase-resistant penicillin is tested against the same strain of staphylococcus.

CONTRAINDICATIONS:

A history of a previous hypersensitivity reaction to any of the penicillins is a contraindication.

RESULTS OF ORAL THERAPY revealed a high percentage of treatment failures with penicillin V potassium, but *no* failures with Tegopen.

		Given Tegopen® (cloxacillin sodium)	Given penicillin V-K
<i>Staphylococcus aureus</i>	(78 patients)	39	39
Returned to clinic at one week.....		29†	38†
Treatment failure at one week		0	18 (47.4%)
<i>Staphylococcus aureus</i> and <i>Streptococcus pyogenes</i>	(9 patients)	4	5
Returned to clinic at one week		4	5
Treatment failure at one week		0	2 (40%)
No initial bacterial growth	(14 patients)	9	5
All 14 healed, regardless of which antibiotic was administered.			
Beta-hemolytic <i>Streptococcus</i>	(1 patient)	0	1
TOTALS:	102 patients	52 patients	50 patients

†Eleven patients did not return for their one-week checkup. These were all called by telephone, and their families reported

the lesions had healed. One patient was dropped from the study, early, because of adverse reaction to medication.

STUDY: DESCRIPTION/PROTOCOL

- 102 nonselected subjects, with initial bacteriology as follows: 77% *Staphylococcus aureus*, 9% mixed *Staphylococcus aureus* and *Streptococcus pyogenes*, and 1% beta-hemolytic *Streptococcus*.†
- All patients were given randomized therapy—Tegopen capsules or oral solution, or penicillin V-K tablets or oral solution, in recommended dosages according to body weight.

- All patients were evaluated after one week's therapy. If there was no improvement, therapy was switched to the other antibiotic. The "other antibiotic" proved to be Tegopen 100% of the time because no treatment failures had occurred with Tegopen.
- A final assessment of progress was made two weeks after initiation of Tegopen therapy.

†The remainder, to equal 100%, consisted of 14 patients (13%) who exhibited no initial bacterial growth. These 14 were all healed, whether given Tegopen or penicillin V-K.

TEGOPEN®

(cloxacillin sodium)

**-effective therapy for staph infections
of the skin and skin structures**

WARNING:

Serious and occasionally fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin therapy. Although anaphylaxis is more frequent following parenteral therapy it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with a history of sensitivity to multiple allergens.

There have been well documented reports of individuals with a history of penicillin hypersensitivity reactions who have experienced severe hypersensitivity reactions when treated with a cephalosporin. Before therapy with a penicillin, careful inquiry should be made concerning previous hypersensitivity reactions to penicillins, cephalosporins, and other allergens. If an allergic reaction occurs, the drug should be discontinued and the patient treated with the usual agents, e.g., pressor amines, antihistamines, and corticosteroids.

Safety for use in pregnancy has not been established.

PRECAUTIONS:

The possibility of the occurrence of superinfections with mycotic organisms or other pathogens should be kept in mind when using this compound, as with other antibiotics. If superinfection occurs during therapy, appropriate measures should be taken.

As with any potent drug, periodic assessment of organ system function, including renal, hepatic, and hematopoietic, should be made during long-term therapy.

ADVERSE REACTIONS:

Gastrointestinal disturbances, such as nausea, epigastric discomfort, flatulence, and loose

stools, have been noted by some patients. Mildly elevated SGOT levels (less than 100 units) have been reported in a few patients for whom pretherapeutic determinations were not made. Skin rashes and allergic symptoms, including wheezing and sneezing, have occasionally been encountered. Eosinophilia, with or without overt allergic manifestations, has been noted in some patients during therapy.

USUAL DOSAGE:

Adults: 250 mg. q. 6h.

Children: 50 mg./Kg./day in equally divided doses q. 6h. Children weighing more than 20 Kg. should be given the adult dose. Administer on empty stomach for maximum absorption.

N.B. : INFECTIONS CAUSED BY GROUP A BETA-HEMOLYTIC STREPTOCOCCI SHOULD BE TREATED FOR AT LEAST 10 DAYS TO HELP PREVENT THE OCCURRENCE OF ACUTE RHEUMATIC FEVER OR ACUTE GLOMERULONEPHRITIS.

SUPPLIED:

Capsules—250 mg. in bottles of 100. 500 mg. in bottles of 100.

Oral Solution—125 mg./5 ml. in 100 ml. and 200 ml. bottles.

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CAT Scan of the Month

RODNEY ELLIOTT, M.D. and STEPHEN GAMMILL, M.D.

A 52-year-old man complained of gross, painless hematuria. Excretory urography showed a patchy nephrogram in the lower poles of both kidneys. Please examine Figures 1 and 2 and establish a differential diagnosis.

Discussion

The lower poles of both kidneys show a patchy nephrogram. The differential diagnosis includes renal infarctions, bilateral primary renal tumors, renal abscesses and metastatic disease.

The left lung of this patient had been removed four years previously for squamous cell carcinoma. The leading diagnostic consideration in this case was, accordingly, metastatic carcinoma. We biopsied the right kidney percutaneously with a 22-gauge needle under fluoroscopic localization. The pathologic diagnosis of metastatic squamous cell carcinoma was confirmed histologically.

Metastatic carcinoma to the kidneys occurs twice as often as primary carcinoma, yet seldom must we deal clinically with this spectrum of a neoplasm, for other viscera are more aggressively attacked by metastases and, hence, lead to death before manifestations within the kidneys become critical.¹ In selected patients, however, metastases to the kidneys present problems that must be dealt with clinically, either as an isolated entity or as part of the overall problems that widespread metastases present.

Of 5,000 necropsies reviewed by Klinger,² 21 patients were afflicted with carcinoma of the lung, and 17 of them had renal metastases. Olsson³ discovered that 20% of the tumors in his series of patients with carcinoma of the lung had metastases to the kidneys. Almost half of them were unilateral. One patient with a pneumonectomy and radical nephrectomy was alive and well ten months later.

Both kidneys are involved with metastases in from 50% to 70% of cases; men are more frequently affected than women. Although lung tumor is the most common neoplasm that metastasizes to the kidneys, other tumors may do so. These include tumors of the breasts, testes,

ovaries, stomach, small and large bowel, and lymphoma.¹

Various diagnostic methods exist for detecting renal metastases. Metastatic carcinoma to the kidney may be detected by urinary cytologic examination.⁴ Excretory urography may show a distortion of the renal collecting system, a patchy nephrogram, or other signs of a mass in the kidney. By angiography, metastases are most often hypovascular or avascular, in contrast to primary neoplasms of the kidney, which usually show neovascularity, laking, and tumor-staining. Primary tumors may also occasionally be devoid of vascularity.

Our case showed minimal distortion of the renal collecting system and a nonhomogenous

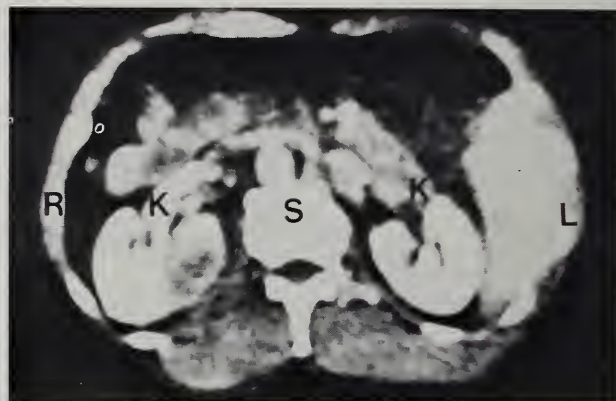


Figure 1. Computerized tomographic cut following intravenous infusion with contrast material featuring the lower pole of the left kidney. The nephrogram is patchy in an irregular fashion with absence of contrast material in the lesion.

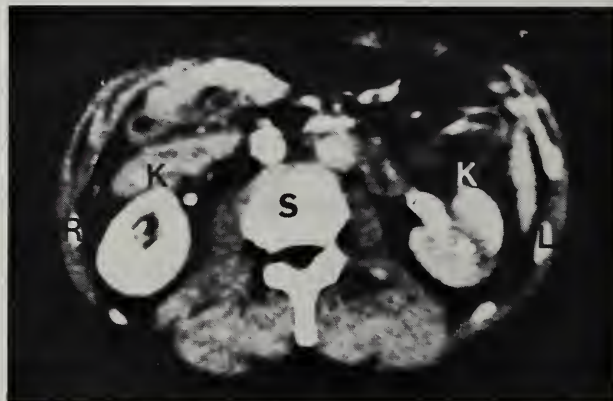


Figure 2. Cut featuring the lower pole of the right kidney. The findings are almost identical to those in Figure 1. (R = Right, L = Left, S = Spine, K = Kidney.)

From the Departments of Urology and Radiology, Baptist Memorial Hospital, 899 Madison Ave., Memphis, TN 38146.

nephrogram on excretory urography. Renal angiography also kept with the usual in that the tumors were avascular, with a patchy nephrogram on late-phase films. We discovered no reports in the literature in which ultrasonography, computerized tomography, or percutaneous fine-needle biopsy were employed as diagnostic aids in the detection and evaluation of renal metastases. Ultrasonographically, metastases and primary tumors are usually echogenic and cannot be differentiated. Primary tumors are often vascular and show some tumor-staining on computerized tomograms following intravenous infusion of contrast material. The metastatic tumors in our patient were avascular following infusion. Considering the pathologic, urographic and angiographic nature of these tumors, this phenomenon was predictable.

Thin-needle biopsy of renal as well as other abdominal masses has been shown to be accurate and essentially hazard-free when properly done. Although a 23-gauge needle may be employed, the 22-gauge needle has been shown equally safe, and provides a better specimen for examination. We therefore routinely use the 22-gauge needle. In the case we present here, and

from other tumors we have biopsied, we usually obtain a specimen suitable for histological evaluation. When occasionally the specimen from fine-needle biopsy is insufficient for definitive diagnosis, we employ a larger 17-gauge cutting needle for rebiopsy.

Invariably, when percutaneous biopsy of malignancies is discussed, the prospect of tumor seeding along the needle tract and tumor dissemination are mentioned as possible complications. We will address this question only by reiterating the conclusions of others: although a theoretical threat of these complications is a possibility, available data suggest that patient survival is not affected.^{5,6}

REFERENCES

1. Abrams HL: Metastatic disease of the kidneys. *J Cont Ed Radiol* 1:38, 1979.
2. Klinger ME: Secondary tumors of the genitourinary tract. *J Urol* 65:144, 1951.
3. Olsson CA: Pulmonary cancer metastatic to the kidney. A common renal neoplasm. *J Urol* 105:492, 1971.
4. Chung HR: Bronchogenic squamous cell carcinoma metastatic to kidney. *Urology* 13:561, 1978.
5. Ferrucci JT, Wittenburg J, Mueller RR, et al: Diagnosis of abdominal malignancy by fine-needle aspiration biopsy. *Am J Roentgenol* 134:323, 1980.
6. Von Schreeb T, Arner O, Skovsted G, et al: Renal adenocarcinoma. Is there a risk of spreading tumor cells in diagnosis puncture? *Scand J Urol Nephrol* 1:270, 1967.

Physician Suicide . . .

(Continued from page 350)

their time to conduct each psychological autopsy. They will be asked to attend training sessions at the outset of the project to discuss interviewing techniques and differential handling of definite and suspected suicides.

The questionnaire to be used in the psychological autopsy will be standardized for all interviews, and will be derived from existing instruments available from the APA and other sources. Completed questionnaires, appropriately coded to protect confidentiality, will be forwarded to the AMA for data processing.

Families will be assured that identifying information will not be divulged to third parties, that names will be excluded from the data repository, and that there will be limited access to the data. Written releases from relatives will be required to allow information verifying that previously unreported suicides took place to be transmitted from interviewers to the AMA data repository.

The project will be launched with announcements, directed to all physicians and auxiliary

members in the pilot states, outlining the project's objectives and operation, with particular emphasis on its safeguards of confidentiality.

The very existence of the project should create an increased awareness of the special vulnerabilities of physicians in training and in practice, and it should serve to alert those physicians who are at especially severe risk. As the project progresses, it is likely to provide an additional focus for detection and treatment programs for the impaired physician, and supplement efforts in medical education to identify and deal with high-risk factors before they become lethal to practitioners of the future.

REFERENCES

1. Blachly PH, et al: Suicide by physicians. *Bull Suicidology* (NIMH) Dec 1968, pp 1-18.
2. Craig AG, Pitts FN: Suicide by physicians. *Dis Nerv Syst* 29:763-772, 1968.
3. Rose DH, Rosow I: Physicians who kill themselves. *Arch Gen Psychiatry* 29:800-805, 1973.
4. Rich CL, Pitts FN: Suicide by psychiatrists. *J Clin Psychiatry* 41:261-263, 1980.

Percutaneous Transluminal Renal Angioplasty (PTRA)

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H. KEITH JOHNSON, M.D.; and ROBERT E. RICHIE, M.D.

As with any new treatment method, the safety and short- and long-term results of percutaneous transluminal renal angioplasty (PTRA) must be established. These results then have to be compared with those obtained with surgical methods of renal artery reconstruction for revascularization of the ischemic kidney. Obviously, no accurate comparison between PTRA and surgery can be made at this time as the surgical experience encompasses two decades while the PTRA experience encompasses only two years. For PTRA to be acceptable it must cure or significantly improve the hypertension in approximately 90% of properly selected patients. Mortality must be negligible in the young patient with fibromuscular dysplasia and must not exceed 3% to 5% in the older patient with generalized atherosclerosis. Morbidity must also be low. In other words, in order to be acceptable, PTRA must be as good as or better than surgery in managing renovascular hypertension.

Medical management has been shown by Hunt and Strong¹ to be a poor alternative to surgery in the management of renovascular hypertension. Despite similar blood pressure (BP) control, medically managed patients fared much worse than their surgically managed counterparts. At nine years 84% of those operated on were alive as opposed to only 43% of those medically managed. In addition, the risk of renal artery stenosis progressing to occlusion is not overcome by medical management. Since PTRA remains the only other alternative to surgery, it is not hard to understand why there is considerable interest in

this procedure. What then is known about PTRA to date? This question is probably best answered by exploring the answers to three penetrating questions concerning PTRA.

First, has PTRA been shown to cure or significantly improve renovascular hypertension? The answer to this is yes. In patients with chemically proven renin-dependent hypertension the BP has been shown to drop in 90% of patients treated with PTRA.² The BP decrease following PTRA may result in a cure (BP controlled off all antihypertensive medications) or a significant improvement (BP controlled on reduced antihypertensive medications). We have seen the BP decrease following PTRA for renovascular hypertension due to atherosclerosis (Fig. 1A-B), saphenous vein bypass graft stenosis (Fig. 2A-B) and transplant renal artery stenosis (Fig. 3A-B). Similar experiences are being reported in the literature with increasing frequency, but to date the series are too small to allow any definite conclusions to be made.

Second, what complications have been reported with PTRA? To answer this question, 174 PTRA procedures reported in the literature were reviewed, and their complications listed in Table 1.

Bleeding resulting from PTRA has been reported in five patients.²⁻⁵ It most commonly occurs at the arterial puncture site. Four patients had hematomas at the femoral artery puncture site without sequelae. One patient had a hematoma formation at the axillary catheterization site which caused median nerve compression and partial paresis. Another patient had a segmental renal artery perforation with retroperitoneal hemorrhage. This was treated conservatively and resolved spontaneously. Perforation of the segmental renal arteries as well as intimal flaps and segmental renal infarctions are

From the Departments of Radiology and Radiological Sciences (Dr. Gerlock), Medicine (Drs. Hollifield, Johnson and MacDonnell), Pediatrics (Dr. MacDonnell), and Surgery (Dr. Richie), Vanderbilt University School of Medicine, Nashville.

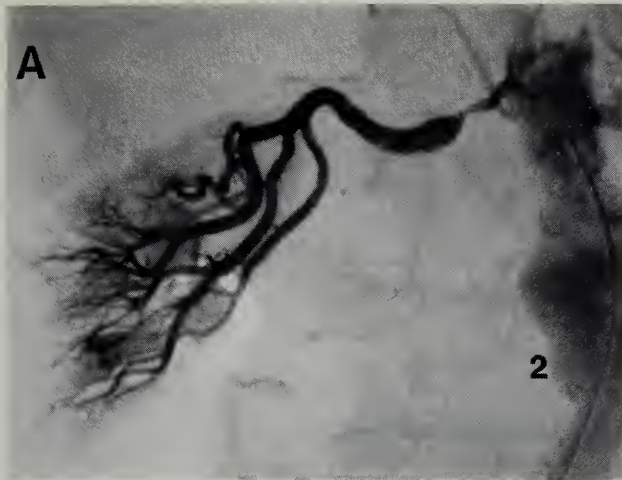


Figure 1. (A) Predilatation angiogram compared with (B) postdilatation angiogram, showing decrease in renal artery stenosis due to atherosclerosis.

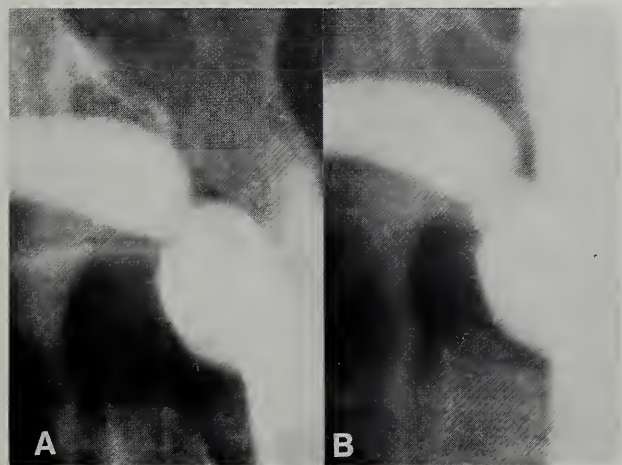


Figure 2. (A) Predilatation angiogram compared with (B) postdilatation angiogram, showing decrease in the stenosis of a saphenous vein bypass graft.

caused by manipulation of the guide wire and catheter in the small renal arteries. Except for the one case of retroperitoneal hematoma no complications have resulted from these abnormalities.

Balloon rupture occurs not uncommonly during the course of PTR. Usually this causes no ill effects, and the ruptured balloon is simply exchanged for a new one. One case is reported in which during its removal the torn balloon became lodged in the femoral artery and had to be removed surgically.⁶ Renal failure is the most significant complication of PTR.^{2,3} Two deaths have occurred in association with renal failure after PTR. In both cases the patients were elderly, had preexisting renal failure and diffuse atherosclerotic disease, and were felt not to be candidates for the surgical correction of their stenotic lesions. One had a plasma creatinine of 9.7 mg/dl and total occlusion of two of three renal arteries. PTR failed to improve renal function or BP following dilatation of the severe

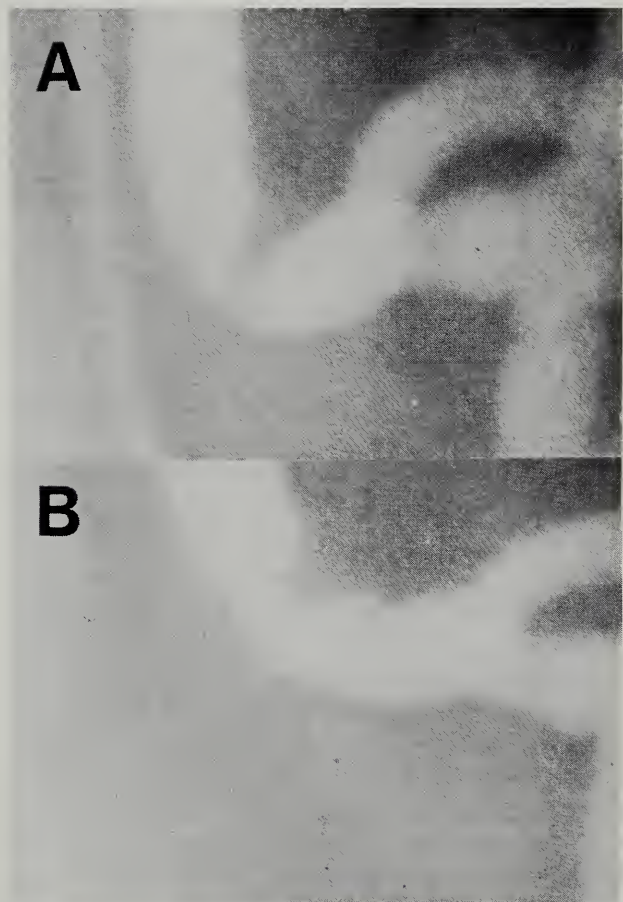


Figure 3. (A) Predilatation angiogram compared with (B) postdilatation angiogram, showing a decrease in the stenosis of transplant renal artery.

TABLE 1
COMPLICATIONS IN 174 PTR A PROCEDURES

Renal Failure	
Transient	3
Exacerbation of chronic renal insufficiency	1
ATN (death)	2
Bleeding	
Retroperitoneal	1
Hematoma femoral artery puncture site	3
Hematoma axillary puncture site with partial media nerve paresis	1
Infarction	
Segmental renal infarcts (asymptomatic)	3
Arterial Injury	
Subintimal flap segmental renal artery	2
Perforation of segmental renal artery	2
Distal Embolization	
Gangrene of toes (surgery)	1
Retained torn balloon in femoral artery	1
TOTAL	19

stenosis of the remaining vessel. This patient died in renal failure when she refused dialysis. The other patient (age 73) expired suddenly seven days after developing acute tubular necrosis following PTR A for a stenotic artery to a solitary functioning kidney. Another 73-year-old patient with a stenosis of the artery to the only functional kidney developed exacerbation of chronic renal insufficiency following PTR A and has required dialysis.

Distal embolization is the next most serious complication reported with PTR A. It has been reported in one case.⁴ A 69-year-old man had distal embolization of atheromatous material to his toes during PTR A. This resulted in gangrene of the toes, which had to be amputated despite good pedal pulses. This patient had suffered severe frostbite of the toes during World War II. There is no doubt that PTR A has a number of inherent risks that can result in serious complications. It is for this reason that close cooperation with a surgeon experienced in the management of renovascular hypertension is mandatory. The procedure should proceed only when this surgeon has operating facilities immediately available.

Our approach to the patient undergoing PTR A is extremely conservative. If the stenotic lesion can be readily traversed by the balloon catheter, it is dilated. When extreme difficulty is encountered in traversing the stenotic lesion, the procedure is terminated since if PTR A fails, surgery can be used electively to manage the stenotic lesion. There is no need to convert an elective surgical procedure into an emergency one.

Finally, the question has to be raised concerning the long-term results of PTR A. We have one year follow-up angiograms of the cases shown in Figures 2 and 3. There has been no restenosis, and their BP remains controlled. Restenosis following PTR A, however, has been reported.^{2,3} Five patients in one series with solitary kidneys who underwent PTR A have gone on to restenosis,³ while in another series four of 65 renal artery stenotic lesions restenosed within one year following PTR A.² Again, the follow-up of patients is just too short to make any definite conclusions about the restenosis rate following PTR A. As time goes by it will be most interesting to see how the complication and restenosis rates of PTR A compare with the graft failure rate of 20% and nephrectomy rate of 10% found in most surgical series.

In conclusion, it is fair to say that over the short term PTR A appears to be at least equal to surgery in the management of renovascular hypertension as to patient safety, BP control, and cost effectiveness. It remains to be seen, however, whether PTR A will provide long-lasting results. The renal artery is subject to high flows (300 ml/min) and great turbulent stress in its proximal portion and should provide a stern test for percutaneous transluminal angioplasty.

REFERENCES

1. Hunt JC, Strong CG: Renovascular hypertension: Mechanisms, natural history and management. *Am J Cardiol* 32:562-574, 1973.
2. Swarten DE: Percutaneous transluminal angioplasty of the renal artery. *Cardiovasc Intervent Radiol* 3:197-206, 1980.
3. Weinberger MH, Yune HY, Grim CE, et al: Percutaneous transluminal angioplasty for renal artery stenosis in a solitary functioning kidney. *Ann Intern Med* 91:684-688, 1979.
4. Tegtmeyer CJ, Dyer R, Teates DC, et al: Percutaneous transluminal dilatation of the renal arteries. *Radiology* 135:589-599, 1980.
5. Swarten DE, Yune HY, Klatte EC, et al: Clinical experience with percutaneous transluminal angioplasty (PTA) of stenotic renal arteries. *Radiology* 135:601-604, 1980.
6. Yune HY, Klatte EC: Circumferential tear of percutaneous transluminal angioplasty catheter balloon. *Am J Roentgenol* 135:395-396, 1980.

Child Check: A Cooperative Program to Stimulate Early Identification of Handicapped Children

BARBARA DEVANEY and SARAH RULE

Early identification and treatment of handicapping conditions is critical to the development of young handicapped children. The importance of the first few years of life to subsequent cognitive development¹ has been acknowledged and the salutary effect of differential treatment of handicapped children was documented as early as 1939.² Identification of these children requires the cooperation of parents, physicians, and other professionals.

Nashville's Regional Intervention Program (RIP) has developed a community awareness program called *Child Check*, which is designed to assist parents in monitoring their children's development and in obtaining needed services for developmental delays and deviancies. The program is based upon a set of materials including a developmental diary, a film, a manual and a brochure listing local services for handicapped children. The diary provides a vehicle for parents to periodically check their young children's developmental skills. The materials stress the importance of early identification and treatment and explain the legal rights of handicapped children.

The program has been conducted on a wide scale, reaching at least 36 of Tennessee's 95 counties. Some 45,000 Tennesseans have received *Child Check* materials and many others have received information through the media. Over 5,000 persons have attended group instruction sessions emphasizing the importance of early intervention. The physician plays a prominent role in early detection and intervention.

An extensive needs assessment, which revealed some parental expectations of physicians, was conducted in 1978 prior to the creation of the *Child Check* materials. Sixty parents of preschoolers in each of three rural Tennessee communities, Paris, Bolivar, and Pulaski, were interviewed with an 87 item questionnaire which measured attitudes toward handicapped children

and early intervention, knowledge of the educational rights of handicapped children, knowledge of child development, and knowledge of community services for handicapped children.

The responses were consistent across the three communities. Forty-three percent agreed that "the family doctor should be the main person responsible for noticing handicaps in children." The belief that "parents are often the last to notice handicaps in their own children" was reflected in the "agree" or "not sure" responses of 64% of the parents to this item. In reply to the question, "If parents think they have a handicapped child, who do you think they should turn to for help?" 73% answered "doctor." Parents evidently did not believe they could identify handicaps in their own children and indeed parental responses to the 27 child development items indicated that many did lack the knowledge to discriminate normal from abnormal development.

Parents lacked knowledge of the types of services schools are required to offer. Only half were aware that "public schools are required by law to look for and enroll handicapped children in school." Less than half knew that "handicapped children have the legal right to a free education at age 4." Many parents did not know that the school system is required to find free appropriate services for children with handicaps which would interfere with their ability to learn.

Two *Child Check* campaign approaches were employed in field tests of the materials in two rural communities. A group instruction approach relied on the materials to convey the information at special meetings, PTAs, and social and service club meetings. A mass media approach conveyed information first, via distribution of diaries and brochures in locations such as churches, stores, schools and offices, and second, via radio, newspaper, and television coverage (public service announcements, talk shows, and feature stories). The assistance of physicians was en-

From the Tennessee Department of Public Health, Nashville.

listed since parents seemed to rely on them to identify handicaps. In one community some 15 physicians displayed posters advertising *Child Check* sessions, and diaries were placed in their offices for distribution.

Post-assessment results in the rural communities revealed that group instruction was effective in increasing knowledge of legal rights and services, insuring that parents received and used the *Child Check* diary, and temporarily changing parents' attitudes toward the importance of early intervention and the role parents can play in it. Mass media had no impact for increasing knowledge or changing attitudes. Those who received diaries outside of group instruction were less likely to use them than those who attended group instruction. While this did not increase parents' knowledge of child development, use of a diary equips them with the knowledge necessary to spot problems.

The *Child Check* campaign is now being tested in an urban setting and the results will be available by June, 1981. A group of physicians is assisting with an additional evaluation of diary distribution and use. Since parents used diaries frequently when they received them in group instruction sessions, it is possible that direct instruction by a physician on use of the diary will have a similar effect. The effects of such instruction will be compared with the effects of distribution without instruction as diaries are simply made available in office lobbies.

The RIP research indicates many parents do not know enough about child development to recognize subtle delays or deviancies in their own children's development. Because of their high credibility with parents, physicians play an important role in educating parents about development. They can assist in their communities by distributing information to parents about development, available services, and the importance of early intervention.

Acknowledgments:

The authors acknowledge the participation of P. David Kurtz, Matthew A. Timm, and Phillip Strain in this project.

This project was supported by funds from grant #G007803105 from the Office of Special Education, U.S. Department of Education, to the RIP Advisory Committee, Inc., Nashville, Tenn. No official endorsement of the OSE should be inferred. RIP is a program of the Division of Children and Youth Services, Middle Tennessee Mental Health Institute.

REFERENCES

1. Bloom BS: *Stability and Change in Human Characteristics*. New York, John Wiley and Sons, Inc, 1964.
2. Skeels H, Dye H: A study of the effects of differential stimulation on mentally retarded children. *Proceedings of the American Association on Mental Deficiency* 44:114-136, 1939.

TMA Physician Placement Service Program

The Tennessee Medical Association sponsors the Physician Placement Service Program as a service to the medical community in Tennessee. While the program is primarily concerned with Tennessee's rural and medically underserved areas, it is structured to provide services for the entire state.

By keeping a comprehensive listing of all practice opportunities in Tennessee, as well as information on physicians wishing to locate in the state, staff is able to determine if potential matches exist. When potential matches are indicated, basic information is forwarded to each of the parties (opportunity and physician). Either party may initiate further contact or request assistance through the Physician Placement Service.

Program Publications

Two publications, "Physicians Wishing to Locate in Tennessee" and "Opportunities to Practice in Tennessee," are printed and updated as needed. All registrants receive copies of these publications. The directories are circulated throughout TMA membership, county medical societies, Tennessee hospitals, state agencies, and other organizations by request.

Brief descriptions of registrants with the Physician Placement Service are published in the *Journal of the Tennessee Medical Association* by code number on a rotating basis. All inquiries to the Placement Service Office are then directed to the respective parties.

Program Registration

Opportunities — Physicians, hospitals, and communities interested in recruiting physicians should contact the Placement Service Office. Informational materials, a questionnaire and a copy of the most up-to-date listing of available physicians will be forwarded immediately. Once the questionnaire is returned, the opportunity will be registered and a brief description of the opportunity will be published in the directory, "Opportunities to Practice in Tennessee," which is mailed to all registered physicians.

Physicians — Any physician seeking a practice location in Tennessee is also sent informational materials, a questionnaire and the most current listing of "Opportunities to Practice in Tennessee." Upon return of the completed questionnaire, a physician is registered and a brief resume is compiled and published in the booklet, "Physicians Wishing to Locate in Tennessee," which is mailed to all registered opportunities.

The Program is offered by TMA as a public service and is free of charge to all registrants. For further information, please contact the TMA Placement Service Office, 112 Louise Ave., Nashville, TN 37203, Tel. (615) 327-1451.



ALLEN S. EDMONSON

Does It Make Any Difference?

Does it make any difference who is president of the Tennessee Medical Association? Coming into this job following so many capable Tennessee physicians, a new officeholder might ask this question. Should a new president believe that he can really make a difference?

I'm sure that most, if not all, of the TMA presidents have accomplishments to which they can "point with pride." Anyone who has followed the TMA and its activities can name some of these. But would these same accomplishments have materialized if Dr. A, B, C, or X had been president instead of Dr. D who did hold the office for a year. Most TMA presidents, with no personal exclusion, have sufficient ego to believe that they must select at least one goal and exert "leadership" all around to get it accomplished in their short term of office. This implies that most of these goals must be "short-term." A long-term goal, when accomplished, should influence the character and direction of the Association and along with it the medical profession in Tennessee. I doubt that many presidents of the TMA believe they have done that.

Significant changes in the character and direction of the Association take place slowly and only through the activity of the several thousand individual physicians of which our medical community is composed. It is their philosophy of life, their attitude toward their fellow man, or their attitude toward the practice of medicine which changes before much of significance is accomplished. Presidents can and do agitate, push, encourage, plead, and even threaten to get the Association moving. I will also. But does it really make a difference?

To answer the question, I don't believe that it does make much difference who is president. He can only "peck" away at the issues. Significant accomplishments by the Association occur when most of the members, not the officers, can "point with pride" to what they are doing or what they have done in their own communities in our state.

Allen S. Edmonson M.D.

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Address organizational matters to L. Hadley Williams,
Executive Dir., 112 Louise Avenue, Nashville, TN 37203

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MAY, 1981

editorials

Class!

Why anyone would turn to the life of one of the world's most despicable women as the subject for a musical show escapes me, particularly when the writers obviously do not admire her, but Jim Rice and Andrew Lloyd Webber have in *Evita*, based on the life of Eva Peron, come up with some of the best music written lately. In the show, Che, who hates *Evita*, grudgingly admits, "She had her moments. She had some style." And she did. For all that she was, as the aristro-

crats sang, "Slut! Dangerous jade!," she had style. Perhaps it was this aspect of a fine, golden veneer of class over a dangerous jade with a conniving, selfish heart that intrigued the writers. The facade is what shows. Although the grass may not be greener over the septic tank, it does hide the fact of the tank — unless the tank overflows.

Advertising by physicians has been ruled in order, and indeed, its prohibition by medical societies has been ruled in restraint of trade. The medical society's role is only to ensure "truth in advertising." I saw a letter written by a colleague for distribution to the profession setting forth his qualifications. It was all true. But its language, even its whole tenor, was unseemly. No class.

I grew up under the teaching that not only was soliciting unethical, but dunning a patient was, although not illegal, downright immoral. In today's climate, however, when few still regard a debt as a moral obligation, and failure to satisfy it a reflection on one's integrity, a rather high percentage of one's accounts receivables has either to be turned out for collection or be lost. So my associates and I some time ago reluctantly agreed we had no choice. After a reasonable time and some phone calls and letters from our own office, accounts long unpaid are turned over to one of several agencies.

Some time back a friend sent me a letter directed in our behalf by a collection agency to his mother's estate. The letter went out through a computer error, but it did result in our reviewing the letters sent by the various agencies which represent us. A few were straightforward statements which, though they bore ill tidings, were simply put, and just written to advise the debtor of his dereliction and the possible consequences. Most of them, though, were deplorable, and in appalling bad taste. They reminded me of PT (for Barnum), the tiger in Pogo whose conversation was adorned with arrows, gaudy signs, and flashing lights, and festooned with bunting. Just so, these letters were an untidy mélange, awash with underlinings, capitalized whole sentences, and "cute" jargon, and filled with innuendo. Awful. Disgraceful. No class.

In this day of changing values, we need to make certain first that our values remain constant. But, in this day of changing perceptions of our profession we also need to make certain that our unchanging values are apparent to our patients and the public. Hucksterism will present us

as peddlers of snake oil. We need to keep close check both on ourselves and on those who represent us to ensure that a proper image is kept before the public.

Style is not everything. It is not paramount, or even necessary, to the practice of medicine. But without it we could wind up without a practice.

J.B.T.

A Better Mousetrap — For the Mouse

Because patterns of human behavior are rather constant over a broad range of activities, reactions are predictable in most situations—if you are cynical enough.

For instance, someone—a father-figure, such as a government official, an agency, a university or hospital administrator (or your wife)—tosses out a hypothesis for consideration (once called—ad nauseam—a straw man). It is calculated to make things run smoother or work better, at least from the standpoint of the theorist. All the minions pontificate on the brilliance of the idea, and the magnificence of the incomparable intellect behind it—and then set about both to implement it (generally) and to subvert it (individually).

About 20 years ago someone, possibly the dean or the executive faculty, at Vanderbilt Medical School decided the curriculum was too rigid and there should be a relatively small “core curriculum” and a lot of elective courses. This received broad support as a brilliant way to attack the information explosion—and anyhow, it was already being done a lot of places. Since there are only so many hours in four years, all of which were already filled to the brim, someone had to give up hours so as to make room for new courses.

There was a saying going around along about that time: “Let George do it.” It was applied to a variety of situations, including the swallowing of bitter pills. As a member of the curriculum committee, I was assured we could find a lot of Georges, but there were none. Everyone already had too few hours, and needed not fewer but more.

I therefore sympathize with President Reagan in his attempt to cut the budget. It is absolutely necessary either to reduce spending (cut pro-

grams) or increase income (from taxes), as interest alone on the national debt is approaching a *trillion* dollars every three years. But as every doctor and every hospital administrator knows, we need *more* Medicaid funds, not less. Cut something else, but not that! And so it goes.

And so it is that we *have* to reduce the cost of medical care. (Cheers! Hurrah! Hip-Hip!) One thing we can do is stop practicing “defensive” medicine. This is an obvious—and easy—way that all the agencies and many medical writers—the editor of *The New England Journal of Medicine*, for example—agree is the thing to do. You and I do, too. Theoretically.

A pathologist in England, where doctors seldom are sued, was sued for failing to do bacterial stains on the appendix of a patient who subsequently turned up with actinomycotic peritonitis. The pathologist won the case by demonstrating that doing serial sections and bacterial stains on every appendix would leave neither technologist time nor funds to do anything else. He indicated, however, that thenceforth *he* would do bacterial stains on all appendixes. I think it would be appropriate for you not to x-ray injured limbs you think ain't broke. But I tend to get fungal stains on granulomas even if they probably (but not *certainly*) are due to foreign material.

It is laudable to desist from practicing defensive medicine; but have you noticed that the people who are pushing hardest for us to do it are at the same time suing us for not doing everything possible for *their own* precious bodies?

J.B.T.

Male and Female Created They Him

Accurate communication of ideas and information is a monumental task and serious business. It is fraught with all sorts of hazards and obstacles, and it is made no easier by the cavalier disregard for the truth and tampering with the language that we see all around us every day. It is tempting to speculate that it is worse today than ever before, and it may be, but “yellow journalism” has always been around; Benjamin Franklin, newspaper publisher and editor, wrote that the job of a newspaper is to report news. The sad fact is that it is hard these days to sift out the news.

Notwithstanding Mr. Franklin's advice, it appears most, or at least a lot of, newspaper editors and publishers think the job of a newspaper is to sell newspapers, and the human mind being the inventive, imaginative mechanism it is, embroidering on the truth is easy. This results in stories such as the one which changed a chance meeting in a restaurant of Miss Carol Burnette and Mr. Henry Kissinger into a smashing *melée*, and a smashing success for selling *National Enquirers*. One hopes Miss Burnette will receive from the jury a smashing reward for being slandered, and that the yellow rag will go smashing down the drain.

Few of us are ever satisfied with just making observations. We have to turn them into theories and hypotheses, some of which pan out and some of which do not. It often takes so long to find out which they will do that they become encrusted with respectability and finally accepted as fact. This has happened to Mr. Charles Darwin's theory on the origin of species and the descent of man. It is clear that few high school science teachers, and even fewer members of the working press, have any appreciation of the large gaps in Darwin's theory, and that it *is* still a theory. Teaching the theory as fact has offended some Bible-believing Christians, and has led to court battles, past and present, and no doubt future. Darwin was an outstanding naturalist, and in his early days made some astonishing observations. After he became ill in his middle years, he spent the remainder of his life thinking about what he had seen and writing it all down. He did such a good job of communicating his ideas that he created a furor that has never died down, and the separation of fact from fiction, or better, from speculation, has been made increasingly difficult by his supporters and detractors alike.

Battle lines have been drawn periodically by those who take exception to Darwin's theory, or perhaps more correctly, to the positions taken by those espousing Darwin's theory, positions which sometimes could not be recognized by Darwin as his legitimate heirs. I have the distinct impression that God would not recognize as His legitimate heirs some of the positions taken on the other side, either, since the Bible is not, and as far as I can tell was never intended to be, a scientific treatise. As each side has taken indefensible positions, the attacker will almost always have the edge. It is a case of two forts being built on sandy soil; it is a common failing of mankind to stretch a few facts too far. Media

coverage has simply added fuel to the fire — after all, a good fight gives them a story to fill in the dull periods.

A few days ago the *Wall Street Journal* reported on the deliberations of a commission made up of U.S. and Soviet historians charged with examining for possible inaccuracies high school history books used in the two countries. Each group found not only gross historical deviations, but also found in textbooks used in the other country numerous propaganda statements having nothing to do with history. Our own historians were as chagrined as their Soviet counterparts at some statements in U.S. history texts. The Soviet historians were something less disturbed by inaccuracies (which they often did not admit to) and not at all by propaganda in their own books. What was apparent to all was that the attitudes of schoolchildren toward the other country were being negatively shaped by propaganda in supposedly objective works.

When approached about cleaning up their act, the publishers were not interested. Moreover, several members of Congress were threatening an investigation — not of the inaccuracies, but of the commission. None of this — the inaccuracies, the propaganda, nor the reaction of either publishers or politicians — should come as a surprise to anybody.

The National Council of Churches is being attacked for espousing the "feminist Bible," whatever that is. Some radical feminists have proclaimed God to be a woman. The National Council says that since the Bible is a living book, they are interested in keeping it contemporary. The truth is, of course, that God is neither a man nor a woman. God is God. Since God is personal, though, and therefore not an "it," reference to God requires a personal pronoun. While it might be just as accurate to use "she" as "he," the writers did not do it that way. If you believe the Bible to be inspired, then you have to assume God wishes to be referred to as "He." A new *translation* of the Bible now and then to improve understanding is acceptable. If the feminists wish to speak of God as "She," and some do, let them. At worst it is silly, and at best it makes them appear ridiculous. I believe the "feminist Bible" does not go quite that far, but a whimsical rewriting of the Bible to suit one's fancy is, like the reworking of the history texts, tampering with history. It takes a lot of rewriting to remove all maleness from God. Paraphrasing a well-worn truism, George Bernard Shaw once

said that the noblest work of man is an honest god.

The truth is that the truth is very hard to come by, whether due to deliberate fraud, to the relative incompetence of most witnesses, including even seasoned reporters, or to political or fiscal ambition, not to mention ignorance of the precise meaning, or the clumsy use, of words. Presenting fact ineptly improves by only a scant fraction on presenting pure fiction as fact. Both are common, and neither does a service to our human situation, which depends upon proper communication of truth to function at all. This is not to sour problems could be solved by improved communication, but it could only help.

For whatever reason, and all other considerations aside, society at every level is perpetually imperiled by deficiencies in communication of all sorts, and disintegration somewhere, perhaps anywhere, or even everywhere, is impending at any given moment. All it takes is a few wrong words, or a few right words wrongly used.

J.B.T.



James R. Fancher, age 72. Died February 23, 1981. Graduate of Tulane University School of Medicine. Member of Chattanooga-Hamilton County Medical Society.

Charles Wescott Herbert, age 49. Died March 19, 1981. Graduate of Bowman Gray School of Medicine. Member of Chattanooga-Hamilton County Medical Society.

William C. Patton, age 44. Died March 2, 1981. Graduate of University of North Carolina School of Medicine. Member of Chattanooga-Hamilton County Medical Society.

James N. Thomasson, age 63. Died March 3, 1981. Graduate of Vanderbilt University School of Medicine. Member of Nashville Academy of Medicine.

Charles T. R. Underwood, age 56. Died March 11, 1981. Graduate of University of Tennessee College of Medicine. Member of Washington-Carter-Unicoi County Medical Association.

new members

The JOURNAL takes this opportunity to welcome these new members to the Tennessee Medical Association.

CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY

Sinesio Z. Aportela, M.D., Chattanooga
Lynn B. Tepley, M.D., Chattanooga

COFFEE COUNTY MEDICAL SOCIETY

Charles V. Bennett, M.D., Tullahoma

MONTGOMERY COUNTY MEDICAL SOCIETY

Larry M. Faust, M.D., Clarksville

NASHVILLE ACADEMY OF MEDICINE

Paulo C. Acosta, M.D., Madison
David D. Alfery, M.D., Nashville
George N. Benson, M.D., Nashville
Marion G. Bolin, M.D., Nashville
Sidney W. Bondurant, M.D., Nashville
F. Edwin Froelich (student), Nashville
Paul D. Kountz, Jr. (student), Nashville
John T. Netterville, Jr., M.D., Nashville
Hugh C. Pribor, M.D., Nashville
James W. Ward, Jr., M.D., Madison
Alastair J. J. Wood, M.D., Nashville
Claude H. Workman, III, M.D., Nashville

OVERTON COUNTY MEDICAL SOCIETY

Edwin R. Forsberg, M.D., Livingston

SULLIVAN-JOHNSON COUNTY MEDICAL SOCIETY

Edward M. Aten, M.D., Bristol, VA
John G. Byers, Jr., M.D., Bristol
Robert P. Dougan, M.D., Kingsport

WARREN COUNTY MEDICAL SOCIETY

Alan W. Ackroyd, M.D., McMinnville
W. Glenn Davis, M.D., McMinnville
Robert D. Reeves, M.D., McMinnville

personal news

Rex Hubbard, M.D., Winchester, has been certified as a Diplomate of the American Board of Obstetrics and Gynecology.

W. Powell Hutcherson, M.D., Chattanooga, has been elected president of the Tennessee Division of the American Cancer Society.

Dale A. Teague, M.D., Louisville, has been elected chief of staff at Baptist Hospital in Knoxville.

Clarence C. Woodcock, Jr., M.D., Nashville, has been reelected to the board of trustees of Blue Cross Blue Shield of Tennessee.

The following physicians have been inducted as Fellows of the American Academy of Orthopedic Surgeons: *Frank B. Gray, M.D.*, Knoxville; *Fred R. Knickerbocker, M.D.*, Bristol; *James B. Talmage, M.D.*, Cookeville.

The following physicians have been certified as Diplomates of the American Board of Internal Medicine: *Vernon M. Carrigan, M.D.*, Clarksville; *Dabney James, M.D.*, Chattanooga.

TMA Members Receive AMA Physician's Recognition Award

Eighteen TMA members qualified for the AMA Physician's Recognition Award during February, 1981.

To qualify for the PRA, a minimum of 150 hours of continuing medical education must be earned over a three-year period; 60 of these hours must be Category 1.

This list does not include members who reside in other states. Names of additional PRA recipients will be published as they are received from AMA.

John Q. Baker, M.D., Bolivar
James S. Bell, M.D., Memphis
Donald R. Campbell, M.D., Chattanooga
Murrell O. Clark, M.D., Chattanooga
David B. Coffey, M.D., Oneida
Robert E. L. Craig, M.D., Chattanooga
Avtar S. Dhaliwal, M.D., Johnson City
Thomas C. Duncan, M.D., Nashville
Charles T. Faulkner, M.D., Nashville
David H. Horowitz, M.D., Nashville
Daniel P. Labrador, M.D., Chattanooga
Daniel E. Martin, M.D., Erin
Thomas P. McGee, M.D., Greeneville
James R. Moyers, M.D., Nashville
Paul E. Slaton, M.D., Nashville
Abiodun S. Solola, M.D., Memphis
Joe K. Wallace, M.D., Crossville
George B. Wyatt, M.D., Jackson

announcements

CALENDAR OF MEETINGS

NATIONAL

- June 4-5 American Society of Transplant Surgeons — Drake Hotel, Chicago
- June 7-11 American Society of Colon and Rectal Surgeons — Broadmoor, Colorado Springs, Colo.
- June 11-13 Society for Vascular Surgery — Hyatt Regency Hotel, Dallas
- June 16-19 Society of Nuclear Medicine — Las Vegas
- June 17-19 Endocrine Society — Convention Center, Cincinnati
- June 22-26 American Orthopedic Society for Sports Medicine — Hyatt Hotel, Tahoe, Nev.
- June 24-27 American Medical Electroencephalographic Association — Caesar's Tahoe Hotel, South Lake Tahoe, Calif.
- July 20-25 Flying Physician's Association — Sheraton Twin Towers, Orlando, Fla.

STATE

- June 16-17 Upper Cumberland Medical Society — Hotel Donoho, Red Boiling Springs

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The continuing medical education accreditation program of the TMA has full approval by the Council on Medical Education of the AMA. An accredited institution or organization may designate for Category 1 credit toward the AMA Physician's Recognition Award those CME activities that meet appropriate guidelines. If you wish information as to how your hospital or society may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203.

IMPORTANT NOTICE

Published in this section are all educational opportunities which come to our attention which might be of interest to our membership. As some of these are very long, full year schedules, and others are detailed descriptions of courses, in order to conserve space, most of them will be published in only one issue of the Journal.

IN TENNESSEE

VANDERBILT UNIVERSITY SCHOOL OF MEDICINE

Clinical Training Program For Practicing Physicians

Opportunities for advanced clinical education for physicians in family practice and in various subspecialties have been developed by the School of Medicine and the Division of Continuing Education of Vanderbilt University. The practicing physician, with the guidance of the participating department chairman, can plan an individualized program of one to four weeks to meet recognized needs and interests. The experience will include contact with patients, discussion with clinical and academic faculty, conferences, ward rounds, learning individual procedures, observing new surgical techniques, and access to excellent library resources. Experience in more than one discipline may be included.

Participating Departments and Divisions

Allergy & Immunology	Samuel Mamey, M.D.
Anesthesiology	Bradley E. Smith, M.D.
Cardiology	Gottlieb C. Friesinger, III, M.D.
Chest Diseases	James D. Snell, M.D.
Clinical Pharmacology	John A. Oates, M.D.
Dermatology	Lloyd King, M.D.
Diabetes	Oscar B. Crofford, M.D.
Endocrinology	David Rabin, M.D.
	David N. Orth, M.D.
Gastroenterology	Steven Schenker, M.D.
General Internal Medicine	W. Anderson Spickard, M.D.
Hematology	Sanford B. Krantz, M.D.
Infectious Diseases	Zell A. McGee, M.D.
Medicine	Grant W. Liddle, M.D.
Neurology	Gerald M. Fenichel, M.D.

Obstetrics & Gynecology	Lonnie S. Burnett, M.D.
Oncology	Robert Oldham, M.D.
Orthopedics	Paul W. Griffin, M.D.
Pathology	William H. Hartmann, M.D.
Pediatrics	David T. Karzon, M.D.
Psychiatry	Marc H. Hollender, M.D.
Radiology	A. Everette James, Jr., Sc.M., J.D., M.D.
Renal Diseases	H. Earl Ginn, M.D.
Rheumatology	John S. Sergeant, M.D.
Surgery	
Cancer Chemotherapy	Vernon H. Reynolds, M.D.
General	H. William Scott, Jr., M.D.
Neurological	William F. Meacham, M.D.
Ophthalmology	James H. Elliott, M.D.
Oral	H. David Hall, D.M.D.
Pediatric	James A. O'Neill, M.D.
Plastic	John B. Lynch, M.D.
Renal Transplantation	Robert E. Richie, M.D.
Thoracic & Cardiac	Harvey W. Bender, M.D.
Urology	Robert K. Rhamy, M.D.

Eligibility: All licensed physicians are eligible.

Administrative Fee: \$200 per week.

Credit: American Medical Association Physician's Recognition Award (Category 1) and American Academy of Family Physician's Continuing Education Accreditation.

Application: For further information and application, contact Paul B. Slaton, M.D., Director, Continuing Medical Education, Vanderbilt University Medical Center, Nashville, TN 37232, Tel. (615) 322-2716.

Continuing Education Schedule

June 8-10	Amplification for the Hearing-Impaired: Research Needs
July 16-18	3rd Annual Mountain Meeting (Internal Medicine)—Asheville, N.C. (12 hours)
July	Neurology and Speech Pathology: The Problem of Aphasia
July 22-25	4th Annual Symposium on Contemporary Clinical Neurology—Hilton Head Island, S.C. (16 hours)
Sept. 18-19	12th Annual Pediatrics Symposium: Immunology and Allergy (10 hours)
September	Blood Banking: Recent Medical and Technical Advances
Oct. 1-4	3rd Annual Medical Alumni Symposium
Oct. 28-30	Robert M. Buchanan Lecturer in Dermatology
Oct. 29-31	Update in Therapeutic Decision-Making (ACP Regional Meeting Scientific Sessions)
November	Annual Rhamy-Shelley Lectureship in Urology
November	Update in Anesthesiology

Dec. 4-5 High Risk Obstetrics Seminar and the
Everett M. Clayton Memorial Lecture
(10 hours)

For information contact Division of Continuing
Medical Education, Vanderbilt School of Medicine,
Nashville, TN 37232, Tel. (615) 322-2716.

MEHARRY MEDICAL COLLEGE SCHOOL OF MEDICINE

Extended Continuing Education Program

Arrangements have been made with the following
services and departments in the medical school to
allow practicing physicians to participate in that ser-
vice's activities for a period of one to four weeks.
This program provides an opportunity for physicians
to study in depth for a specified period. The schedule
of activities is individualized in response to the physi-
cian's request by the participating department. The
experience includes conferences, ward rounds, au-
diovisual materials and contact with patients, resi-
dents and faculty.

Participating Departments

Anesthesiology	Ramon S. Harris, M.D.
Family Practice	John Arradondo, M.D.
Internal Medicine	
Cardiology	John Thomas, M.D.
	Kermit R. Brown, M.D.
	Qamar A. Kahn, M.D.
Chest Disease	Joseph M. Stinson, M.D.
	Paul A. Talley, M.D.
	Edward A. Mays, M.D.
Dermatology	Thomas W. Johnson, M.D.
	David Horowitz, M.D.
Gastroenterology	Ludwald O. P. Perry, M.D.
	Buntwal M. Somayaji, M.D.
General Medicine	Edward A. Mays, M.D.
Hematology/Oncology	Robert S. Hardy, M.D.
Neurology	Calvin L. Calhoun, Sr., M.D.
	Gregory Samaras, M.D.
Obstetrics & Gynecology	Henry W. Foster, M.D.
Ophthalmology	Axel C. Hansen, M.D.
Orthopedics	Wallace T. Dooley, M.D.
Pathology	Louis D. Green, M.D.
	John C. Ashhurst, M.D.
Pediatrics	E. Perry Crump, M.D.
Surgery	
General	Louis J. Bernard, M.D.
Neurological	Charles E. Brown, M.D.
Thoracic and Cardiovascular	David B. Todd, M.D.
	Ira D. Thompson, M.D.
Urology	Marcelle R. Hamberg, M.D.

Fee: \$100 per week.

Credit: American Medical Association Physician's
Recognition Award (Category 1). American Academy
of Family Physicians Continuing Education Accredi-
tation and Continuing Education Units by Meharry
Medical College.

Application: For further information contact Frank A.
Perry, Sr., M.D., Director, Continuing Education,
Meharry Medical College, 1005 18th Ave. North,
Nashville, TN 37208, Tel. (615) 327-6235.

EAST TENNESSEE STATE UNIVERSITY Quillen-Dishner College of Medicine

June 4	J. Carroll Long Lecture
June 5-6	Geriatrics II — Sexuality and the Aging
July 18	Basic Science Review III: Psychopharmacology
Aug. 15	Stress in Medical Practice
Sept. 19	Advances in Laboratory Medicine
Oct. 7-9	Infection Control
Oct. 16	Pediatrics Prep III: Neonatology
Nov. 2-6	CPR: Faculty Inservice

For information contact Office of Continuing Med-
ical Education, East Tennessee State University,
Quillen-Dishner College of Medicine, Johnson City,
TN 37614, Tel. (615) 928-6426, ext. 204.

UNIVERSITY OF TENNESSEE CENTER FOR THE HEALTH SCIENCES

Continuing Education Schedule

This comprehensive listing of UTCHS courses in-
cludes programs of the Chattanooga, Knoxville, and
Memphis units. The codes (C), (K), and (M) indicate
the continuing education unit handling the arrange-
ments for a particular program.

June 4-7	(C)	Family Medicine Review
June 4-8	(K)	3rd Annual Practical Otolaryn- gology Course for the Primary Care Physician
June 15-18	(C)	Infection in the Emergency Room
June 16-17	(M)	5th National Conference on Pa- tient Education in the Primary Care Setting (sponsor: Dept. of Family Medicine)—Hyatt Re- gency, Memphis
June 22-25	(C)	Diagnostic Radiology for the Primary Care Physician— Orlando, Fla.
July 10-12	(M)	Cardiac Emergencies— Snowmass, Colo.
Aug. 12-15	(C)	Emergencies in Obstetrics and Gynecology—Gatlinburg

Community-Based CME

Knoxville Campus

Blount Memorial Hospital; Maryville, Tenn.
Every Tuesday; 7-8 a.m. (1 hr. credit)

Jellico Hospital; Jellico, Tenn.
Monthly, third Tuesday; 7-9 p.m. (2 hrs. credit)

Morristown-Hamblen County Hospital; Morristown, Tenn.

Alternate months, third Tuesday; 6:30-8 p.m. (1.5 hrs. credit)

Sweetwater Community Hospital; Sweetwater, Tenn.

Monthly, second Wednesday; 12:00 noon (1 hr. credit)

Takoma Hospital; Greeneville, Tenn.

Monthly, dates vary; 6:30 p.m. (1-2 hrs. credit)

Memphis Campus

UPDATES IN MEDICINE

Carroll County Hospital; Huntingdon, Tenn.

McKenzie Memorial Hospital; McKenzie, Tenn.

Henry County Hospital; Paris, Tenn.

Monthly, third Monday; 6:15-9 p.m. (2 hrs. credit); locations rotate.

If you would like assistance in planning a community-based CME program, contact the Associate Dean for CME and every attempt will be made to assist you through one of our three campuses.

For further information about any of these courses, please call the appropriate individuals below:

(C) Mr. LeRoy J. Pickles, Chattanooga
Tel. (615) 756-3370

(K) Mr. Jim Farris, Knoxville
Tel. (615) 971-3345

(M) Ms. Grace Wagner, Memphis
Tel. (901) 528-5547

or write or telephone:

Associate Dean for CME
University of Tennessee
College of Medicine
800 Madison Ave.
Memphis, TN 38163
Tel. (901) 528-5605

IN SURROUNDING STATES

UNIVERSITY OF KENTUCKY

Mini-Residencies in Office Management Of Emotional Problems

The objective of this course is to give physicians an ideal emotional counseling technique that fits busy office practices. The technique uses a concept of emotions that is consistent with human anatomy and psycho physiology. Yet, the technique requires no more physician time or patient cost than routine evaluations of new patients. Finally, the technique is readily understandable and easy for practitioners to apply.

One, two and three week courses. Minimum of 40 hours per week. *Tuition Fee:* \$350 per week for the 1st & 2nd week of training; \$500 for 3rd week of supervised practice with patients in the Intensive RBT Treatment Program.

For further information contact Maxie C. Maulsby, Jr., M.D., Office of Continuing Medical Education, Dept. of RBT, University of Kentucky, Lexington, KY 40506.

BOWMAN GRAY

A course in Medical Sonics, organized in eight-week segments covering basics, neurosonology, urology, abdomen, ob/gyn, cardiology, etc., will be offered from April 21-June 12, 1981. *Credit:* 30 hours per week in AMA Category 1.

Several one-week courses in Abdominal Real-Time Sonography will be held on April 6-10, July 13-17, and Aug. 10-14, 1981. *Credit:* 30 hours per week in AMA Category 1.

A seminar in Advanced Applied Ultrasound in Obstetrics will be held from June 18-20, 1981. *Credit:* 20 hours AMA Category 1.

For information contact Ms. Dorlee Canter, Postgraduate Medical Sonics, Bowman Gray School of Medicine, 300 S. Hawthorne Rd., Winston-Salem, NC 27103, Tel. (919) 748-4505.

OF SPECIAL INTEREST

UNIVERSITY OF SOUTH FLORIDA

Aug. 2-8 Advances in Diagnostic Imaging—Hotel Scandinavia, Copenhagen, Denmark. *Credit:* 30 hours AMA Category 1. The following week an optional mini-symposium—Nuclear Medicine for the Diagnostician—offers 12 hours category 1 credit in Stockholm, Sweden, with a side trip planned for Helsinki, Finland.

For information contact Dr. L. R. Muroff, P.O. Box 17241, Tampa, FL 33682, Tel. (813) 971-6000, ext. 297.

ASSOCIATES OF OTOLARYNGOLOGY

July 31-Aug. 2 Ear, Nose & Throat Symposium for the Family Physician—The Lodge, Vail, Colo. (Cosponsored by the Porter Memorial Hospital and Swedish Medical Center.)

For information contact Lisa Lee, ENT Symposium, 950 E. Harvard, Suite 500, Denver, CO 80210, Tel. (303) 744-1961.



Yes, Uncle Sam Needs You. Today, As Much As Ever.

The U.S. Army Medical Department is experiencing a shortage of physicians in its community hospitals and health clinics.

We are looking for dedicated physicians, physicians who want to be, not salesmen, accountants, and lawyers, but physicians. For such physicians we offer a practice that is practically perfect. In almost no time you experience a spectrum of cases some physicians do not encounter in a lifetime. You work without worrying whether the patient can pay or you will be paid. You prescribe, not the least care, not the most defensive care, but the best care.

A military physician practicing in the Southeast United States is afforded an opportunity for experience and leisure activities unlike nearly any other part of the U.S. If you like hunting, fishing, tennis, water sports, etc., outdoor activities combined with an excellent work environment we may have something for you.

The following is a list of the major Army Community Hospitals, in the Southeast, which have vacancies:

Fort Polk, Leesville, LA

Fort McClellan, Anniston, AL

Fort Benning, Columbus, GA

Fort Rucker, Dothan, AL

Fort Stewart, Savannah, GA

Fort Jackson, Columbia, SC

Redstone Arsenal, Huntsville, AL

Fort Bragg, Fayetteville, NC

Vacancies may vary as physicians arrive and depart but will exist in nearly every speciality at one medical facility or another. To obtain more information and vacancies by speciality please contact the Army Medical Department Personnel Counselor listed below. Be our guest at one of the above medical facilities or any other Army Medical facility.

WRITE OR CALL COLLECT:

CPT Edward Lacy, MSC
1407 Union Avenue, Suite 407
Memphis, TN 38104
(901) 725-4445

ARMY MEDICINE, BE ALL YOU CAN BE.

AMA Physician Distribution Publication Shows 437,486 Doctors

There is one physician for every 535 persons in the United States. Of the nation's 375,811 active physicians, 91.2% are engaged in direct patient care, bringing the ratio of physicians, excluding those who are employed by the U.S. government, to 187 physicians per 100,000 persons. Washington, D.C. ranks first among cities in the number of physicians, with 524 per 100,000 population. South Dakota ranks last among the states with 106 physicians per 100,000 people.

These facts are contained in the recently released American Medical Association's 16th edition of *Physician Distribution and Medical Licensure in the U.S., 1978*.

The 388-page volume, prepared by the AMA's Center for Health Services Research and Development, is comprised of statistical information from the AMA physician masterfile, the most comprehensive and complete source of physician data in the U.S.

The volume answers such diverse types of questions as how many of the total medical doctor population of 437,486 practice aerospace medicine; how many of the 45,540 women physicians are engaged in surgical specialties; how many doctors practice forensic pathology; and how many doctors live in Montana.

The work also contains data covering licenses issued to physicians by licensing boards, policies of state boards of medical examiners for initial licensure for graduates of U.S. medical schools, trends in the distribution of physicians, concentration of specialties and information on hospitals, population and income.

Information covering the ratio of physicians, excluding those in government (federal), in the U.S. reveals that New England has the highest ratio (238) and the lowest (134) is in the South Central division (Alabama, Kentucky, Tennessee and Mississippi).

The latest U.S. physician ratio to population of 187 per 100,000 is approximately 23% more than the 1971 figure of 152 physicians per 100,000 population.

While 1978 figures are not available to compare the United States ratio to European countries, information supplied by the World Health Organization shows that for 1975, the ratio in France is one physician for every 650 persons; in Italy the ratio is one physician to every 490 persons; in West Germany it is one physi-

cian for every 500 persons; in Sweden it is one physician for every 580 persons; and in Great Britain it is one physician for every 760 persons.

In the area of Physician Manpower, the section describes the distribution of 375,811 physicians who are professionally active in the United States and possessions. Most of the active physicians, 342,714, or 91.2%, are classified in "patient care." Of the physicians engaged in "patient care," 54,893 are in general practice which includes family practice, 96,940 are in medical specialties, 98,567 are involved in surgical specialties, and another 92,314 in "other specialties."

Of the 45,540 women physicians, approximately 6,688 more than in 1976, 11,979 are engaged in medical specialties and another 12,251 are involved in "other specialties."

Of the 56,197 physicians engaged in general practice, 21,611 are engaged full time in family practice medicine. Included in the "other specialties" category are 584 physicians practicing aerospace medicine, another 234 physicians engaged in forensic medicine and another 756 practicing general preventive medicine.

The volume in addition includes data on the 20,242 physicians who work for the federal government. Most of the number, 41.3%, are located in the southern region and particularly in the South Atlantic Census Division. A total of 12.6% of the federal physician population is engaged in "administration," while 9.4% is involved in "research."

The book, divided into two sections, devotes a section to Medical Licensure in the U.S. Data is presented on licensed physicians, licensure requirements and policies of licensure boards. According to information supplied, in 1978, 41,457 licenses were issued to MDs by state licensing boards.

Statistical information on physician location, specialty and professional activity, compiled by the AMA Center for Health Services Research and Development, comprises *Physician Distribution*. Cost is \$15 each for 1-10 copies; \$14.50 each for 11-49; \$14 each for 50 copies or more; and \$21 on foreign orders. To order, write OP-071, AMA Order Department, P.O. Box 821, Monroe, WI 53566.

Arsenic-Laced Moonshine Poisons Drinkers

Contaminated moonshine whiskey may be an important cause of arsenic poisoning in some areas of the country.

Of 12 cases of documented arsenic poisoning treated during the 1960s and 1970s at the Medical College of Georgia Hospital, Augusta, five were directly related to drinking illicit whiskey, and there was

one additional case that might have been caused by moonshine.

It has long been known that lead poisoning sometimes results from moonshine made in stills or stored in containers that contained lead. Arsenic poisoning is a newly discovered hazard of the illegal whiskey. Although production and consumption of moonshine in Georgia has substantially decreased in recent years, the problem still exists. Some 683 illicit stills were seized in 1959. Government agents found only 64 stills in 1977. But the mash capacity of those 64 stills was almost 70,000 gallons, and consumption of moonshine is still a way of life in many areas of the Southeast. Samples of moonshine from supplies seized by government agents contained high concentrations of arsenic, more than ten times the amount considered allowed in drinking water.

Moonshine is not nearly as potent as folklore leads drinkers to believe. Alcohol content varied from 38 to 76 proof, whereas most whiskeys on the legal market vary from 80 to 90 proof, and some are even stronger.

There is only speculation as to how the arsenic gets into the moonshine. It could be a contaminant of lead or solder used in the stills. Rat poison containing arsenic is frequently used in close proximity to the grain and mash stores. Victims of arsenic-laced moonshine often were severely ill. One 34-year-old man was left crippled and on crutches. Another, hospitalized with a tube in the throat for breathing, died of a lung clot.

Herbal Medicine Followers Risk Serious Injury or Death

Those who reject conventional medical services and turn to herbal remedies and "self-help" medicine run risk of inflicting serious injury or death on themselves. Three young women used pennyroyal oil obtained in a health food store to induce abortion. One died and another was seriously ill.

The Food and Drug Administration regulates conventional medicines to insure they are safe and effective, but FDA has little control over herbal medicines and health food stores. There is only speculation as to why the women turned to the dangerous herbal remedy rather than using conventional services to terminate pregnancy. In their area, Colorado, legally induced abortion is widely available, and Colorado is using state funds to finance abortions for low-income women. In fact, one of the three had a previous legal abortion, with satisfactory results.

The extent of damage from pennyroyal oil is unknown. There is little reporting to medical authorities, and most adverse results might be recorded as food poisonings. More government control is not the answer. The main thrust of control should be continued public education on the most popular forms of self-treatments.

MEDICINE WITH A TOUCH OF ADVENTURE

Today, Navy Medicine gives you the opportunity to be the doctor you want to be. We offer a challenging practice with a minimum of administrative overhead. Plus excellent facilities and support personnel.

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Radiology
Surgery
Urology
Pediatrics

Fellowships

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Cardiology
Endocrinology/
Metabolism
Pulmonary Med
Gynecologic/
Oncology
Infectious Disease
Hand Surgery
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For more information please contact:

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Kansas City, Missouri

American Medical Services Association, Inc., a Kansas City-based multiple hospital physician group, is seeking career-oriented primary care and emergency care physicians who:

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We are successful because we offer the unique package of salary and benefits in the health care industry. All of our physicians participate in the ownership of the company.

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Kansas City, Missouri 64111
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FAMILY PRACTITIONER NEEDED

Fully equipped clinic looking for one or two family practitioners. Town of approximately 10,000; 325-bed hospital eight miles away. Many recreational opportunities, salary and fringe benefits. Partial ownership negotiable.

Send resume to 401 Medical Arts Bldg., Oak Ridge, TN 37830 or telephone (615) 482-7913.

GENERAL PHYSICIAN NEEDED

Position for full-time physician for general medical needs for resident population of JCAH accredited Developmental Center for the mentally retarded. Office and infirmary type practice with area JCAH accredited hospitals for referrals; also interdisciplinary program planning. Tennessee license required. Salary negotiable. Fringe benefits include paid professional liability insurance, retirement program and health insurance.

Contact G. W. Oden, M.D., Director Medical Services, Greene Valley Developmental Center, Greeneville, TN 37743. Phone 615/639-2131.

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Incorporated, fee for service, six man group, all Board certified or eligible. Require one or two physicians, work 1,752 hours/yr (8 hour shifts) double coverage. Salary \$74,000/yr, plus \$10,000 profit sharing, plus all insurances including professional liability. Only experienced emergency physicians should apply. Send curriculum vitae to Shane Bennoch, M.D., Emergency Dept., Cox Medical Center, 1423 N. Jefferson, Springfield, MO 65802 or call 417-836-3193 office or 417-887-3733 home.

PHYSICIANS WANTED

Space available for specialist or primary care physician in an extremely modern doctor's office in a very pleasant Memphis suburb. No Public Aid. Well-equipped Laboratory and X-ray. Excellent opportunity for association or partnership.

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Clinical and directorship positions available in this moderate volume emergency department located in the southeastern portion of Tennessee. Excellent compensation, paid professional liability insurance, and flexible scheduling.

For details send credentials in confidence to John Kutchback, 970 Executive Parkway, St. Louis, MO 63141, or call toll-free 1-800-325-3982.

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West Memphis, Arkansas

Staff position available in this modern emergency department seeing approximately 12,000 patients annually. Enjoy an excellent income, flexible scheduling, and paid malpractice insurance; plus the amenities associated with a major metropolitan area.

For details send credentials in confidence to Susan Haberman, 845 East Arapaho, Richardson, TX 75081; or call collect 214-669-0606.

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PENINSULA PSYCHIATRIC HOSPITAL

Jones Bend Road

Louisville, Tennessee 37777

Peninsula Hospital is a 60-bed private psychiatric hospital, providing treatment for acute emotional disturbances, alcohol and drug abuse, with separate programs for adults and adolescents.

Peninsula is accredited by the Joint Commission on Accreditation of Hospitals and is a member of the American Hospital Association, Tennessee Hospital Association, and the National Association of Private Psychiatric Hospitals.

Treatment of Patients

The age range of patients is from teens to advanced age. Peninsula's program applies to all categories of nervous and mental disorders, including alcohol and drug abuse.

The program includes individual psychotherapy, large and small group therapy, as well as special groups for couples, adolescents, parents, families, alcoholics.

Activities

Recreational therapies include tennis courts, gymnasium, swimming pool, handball, paddleball, volleyball, softball, archery, jogging, fishing, horseshoes, shuffleboard, weight lifting, and mountain hiking.

Occupational therapies include crafts, music, sewing, needle art, library, and table games.

A high school educational program is conducted by an educational specialist and is coordinated with public school programs.

Admission Procedures

Patients have access to the full range of activities on the scenic 25 acre ground located on Fort Loudon Lake.

Patients may be admitted by telephone appointment upon referral of their doctor or may be self referred. It is desirable for the hospital to receive information from physicians and therapists who have previously treated the patient.

Patient Inquiries Welcome

(615) 573-7913 Bruce Q. Green, M.D.

(615) 983-8216 Will Brownlow, Administrator

CYCLAPEN®-W (cyclacillin)

Indications

Cyclacillin has less *in vitro* activity than other drugs in the ampicillin class and its use should be confined to these indications: Treatment of the following infections:

RESPIRATORY TRACT

Tonsillitis and pharyngitis caused by Group A beta-hemolytic streptococci
 Bronchitis and pneumonia caused by *S. pneumoniae* (formerly *D. pneumoniae*)
 Otitis media caused by *S. pneumoniae* (formerly *D. pneumoniae*) and *H. influenzae*
 Acute exacerbation of chronic bronchitis caused by *H. influenzae**

*Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to *H. influenzae*.

SKIN AND SKIN STRUCTURES (integumentary) infections caused by Group A beta-hemolytic streptococci and staphylococci, non-penicillinase producers.

URINARY TRACT INFECTIONS caused by *E. coli* and *P. mirabilis*. (This drug should not be used in any *E. coli* and *P. mirabilis* infections other than urinary tract.)

NOTE: Perform cultures and susceptibility tests initially and during treatment to monitor effectiveness of therapy and susceptibility of bacteria. Therapy may be instituted prior to results of sensitivity testing.

Contraindications Contraindicated in individuals with history of an allergic reaction to penicillins.

Warnings Cyclacillin should only be prescribed for the indications listed herein.

Cyclacillin has less *in vitro* activity than other drugs of the ampicillin class. However, clinical trials demonstrated it is efficacious for recommended indications.

Serious and occasional fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin. Although anaphylaxis is more frequent following parenteral use, it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with history of sensitivity to multiple allergens. There are reports of patients with history of penicillin hypersensitivity reactions who experienced severe hypersensitivity reactions when treated with a cephalosporin. Before penicillin therapy, carefully inquire about previous hypersensitivity reactions to penicillins, cephalosporins and other allergens. If allergic reaction occurs, discontinue drug and initiate appropriate therapy. Serious anaphylactoid reactions require immediate emergency treatment with epinephrine. Oxygen, I.V. steroids, airway management, including intubation, should also be administered as indicated.

Precautions Prolonged use of antibiotics may promote overgrowth of nonsusceptible organisms. If superinfection occurs, take appropriate measures.

PREGNANCY: Pregnancy Category B. Reproduction studies performed in mice and rats at doses up to 10 times the human dose revealed no evidence of impaired fertility or harm to the fetus due to cyclacillin. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, use this drug during pregnancy only if clearly needed.

NURSING MOTHERS: It is not known whether this drug is excreted in human milk. Because many drugs are, exercise caution when cyclacillin is given to a nursing woman.

Adverse Reactions Oral cyclacillin is generally well tolerated. As with other penicillins, untoward sensitivity reactions are likely, particularly in those who previously demonstrated penicillin hypersensitivity or with history of allergy, asthma, hay fever, or urticaria. Adverse reactions reported with cyclacillin: diarrhea (in approximately 1 out of 20 patients treated), nausea and vomiting (in approximately 1 in 50), and skin rash (in approximately 1 in 60). Isolated instances of headache, dizziness, abdominal pain, vaginitis, and urticaria have been reported. (See WARNINGS) Other less frequent adverse reactions which may occur and are reported with other penicillins are anemia, thrombocytopenia, thrombocytopenic purpura, leukopenia, neutropenia and eosinophilia. These reactions are usually reversible on discontinuation of therapy.

As with other semisynthetic penicillins, SGOT elevations have been reported.

As with antibiotic therapy generally, continue treatment at least 48 to 72 hours after patient becomes asymptomatic or until bacterial eradication is evidenced. In Group A beta-hemolytic streptococcal infections, at least 10 days' treatment is recommended to guard against risk of rheumatic fever or glomerulonephritis. In chronic urinary tract infection, frequent bacteriologic and clinical appraisal is necessary during therapy and possibly for several months after. Persistent infection may require treatment for several weeks.

Cyclacillin is not indicated in children under 2 months of age.

Patients with Renal Failure Cyclacillin may be safely administered to patients with reduced renal function. Due to prolonged serum half-life, patients with various degrees of renal impairment may require change in dosage level (see DOSAGE AND ADMINISTRATION in package insert).

Dosage (Give in equally spaced doses)

INFECTION	ADULTS	CHILDREN*
Respiratory Tract		
Tonsillitis & Pharyngitis	250 mg q.i.d.	body weight < 20 kg (44 lbs) 125 mg q.i.d. body weight > 20 kg (44 lbs) 250 mg q.i.d.
Bronchitis and Pneumonia		
Mild or Moderate Infections	250 mg q.i.d.	50 mg/kg/day q.i.d.
Chronic Infections	500 mg q.i.d.	100 mg/kg/day q.i.d.
Otitis Media	250 mg to 500 mg q.i.d.†	50 to 100 mg/kg/day†
Skin & Skin Structures	250 mg to 500 mg q.i.d.†	50 to 100 mg/kg/day†
Urinary Tract	500 mg q.i.d.	100 mg/kg/day

*Dosage should not result in a dose higher than that for adults. †depending on severity

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VALLEY PSYCHIATRIC HOSPITAL

... means excellence in quality care.

Valley is a fully accredited private psychiatric hospital staffed by professionals with outstanding credentials in the field of mental health and emotional disorders.

The carefully coordinated team approach includes intensive individual and group psychotherapy, and expressive therapy for the patient whose condition requires evaluation and professional treatment.

Valley is a 100-bed private psychiatric hospital nestled in an 81-acre wooded area on the outskirts of Chattanooga, Tenn. Structured clinical programs include:

ADULT PSYCHIATRIC PROGRAM—Admission to the adult program at Valley involves diagnostic procedures such as complete physical examination, psychological testing, psychiatric evaluation and review of social history. Based upon results of these initial tests, the patient's attending psychiatrist together with members of the psychiatric treatment team develop a total treatment plan which may include group therapy in addition to individual therapy, occupational and recreational therapy as well as family involvement.

Weekly meetings of the treatment team are held to modify the original treatment plan based on the patient's progress while in the hospital.

CHILD AND ADOLESCENT PROGRAM—Valley maintains a child and adolescent program for youngsters undergoing specific difficulties in growth and development. This program provides individual as well as group therapy and includes activities in art, sports and field trips of special interest to this age group.

An active school experience is part of this program. Individual lesson plans, administered by special education teachers and worked out with the children's own school district educators, keep

them from falling behind peers in their own community school. Because the student is allowed to move at his own pace in an individualized program, he develops confidence and self-discipline.

The Valley program regards adolescence as a psychological growth process—not a disease—so that time, skill and experience are critical ingredients of the treatment.

SUBSTANCE ABUSE PROGRAM—This treatment team is trained and experienced in the treatment of alcoholics and other drug-dependent persons.

A number of approaches are used in the treatment of alcoholism and/or drug abuse: individual and group therapy, substance abuse counseling, lectures, communication skills training, pastoral counseling, physical and recreational therapy, the 12 Steps of Alcoholics Anonymous, Antabuse therapy, and various forms of adjunctive therapy. Whenever possible, family members are urged to become involved in the patient's treatment through out-patient family and individual counseling.

REFERRAL—Valley maintains a 24-hour, seven-day-a-week emergency referral service. Referrals are accepted from psychiatrists and other physicians, the clergy, social workers, mental health professionals, social agencies, self and family.

Valley is fully accredited by the Joint Commission on the Accreditation of Hospitals.

Dr. Robert G. Aug, M.D., Medical Director

Dr. G. Michael Schmits, M.D., Medical Director of the Child and Adolescent Program

Dr. Kenneth E. Shoemaker, M.D., Medical Director of the Substance Abuse Program

VALLEY PSYCHIATRIC HOSPITAL

P. O. BOX 21373 • SHALLOWFORD ROAD

CHATTANOOGA, TN 37421

(615) 894-4220

Abstract of the Proceedings of the House of Delegates Of the Tennessee Medical Association Knoxville, Tennessee —April 8-11, 1981

Call to Order

The 146th Annual Meeting of the Tennessee Medical Association was conducted in Knoxville, Tennessee, April 8-11, 1981, with headquarters in the Hyatt Regency Hotel. The House of Delegates met initially at 3:00 p.m., April 8, 1981, with Charles E. Allen, M.D., Johnson City, presiding as speaker of the House and Malcolm R. Lewis, M.D., Nashville, as vice speaker.

Invocation

At the opening session, John H. Burkhart, M.D., Knoxville, gave the invocation: "Let us pray. Almighty God, our Father, for all of your grace, mercy, and magnificent blessings, we are truly grateful; for the beauty of the earth and the splendor of another spring, we give you thanks; for the Association and fellowship which this meeting today affords, we bow in gratitude. We are aware of our responsibilities to you, our fellow man and to our professional colleagues. As we meet this week in our capacity as representatives of a noble calling in a great and proud state, let us remember those responsibilities so that what we decide and do may be to that greater service to mankind and to the greater glory of our creator and our judge. Amen."

Report of the Committee on Credentials

F. Hammond Cole, M.D., Memphis, chairman of the Committee on Credentials, reported there was a quorum present. The speaker declared the House was in session.

1980 Minutes Approved

The speaker announced that an abstract of the minutes of the last regular session of the House of Delegates was reproduced in the June 1980 issue of the *Journal of the Tennessee Medical Association*. It was moved and seconded that the abstracted minutes of the 1980 session of the House of Delegates be approved as published in the June 1980 issue of the *Journal*. **The motion was adopted.**

Reference Committees

The speaker announced the personnel of the reference committees to consider reports, resolutions, amendments, and all matters requiring action by the House of Delegates.

REFERENCE COMMITTEE ON CREDENTIALS

F. Hammond Cole, Jr., M.D., Memphis, *Chairman*
Dee L. Metcalf, M.D., Greeneville
Hugh E. Green, M.D., Carthage

REFERENCE COMMITTEE ON AMENDMENTS TO THE CONSTITUTION AND BY-LAWS

John H. Burkhart, M.D., Knoxville, *Chairman*
Kent Kyger, M.D., Nashville
Hugh Francis, M.D., Memphis

REFERENCE COMMITTEE A

Robert W. Ikard, M.D., Nashville, *Chairman*
Phillip A. Pedigo, M.D., Memphis
Joseph W. Harb, M.D., Knoxville

REFERENCE COMMITTEE B

Hays Mitchell, M.D., Cleveland, *Chairman*
James T. Craig, M.D., Jackson
Sarah H. Sell, M.D., Nashville

REFERENCE COMMITTEE C

Charles E. Jordan, M.D., Cookeville, *Chairman*
David P. McCallie, M.D., Chattanooga
Dee J. Canale, M.D., Memphis

REFERENCE COMMITTEE D

Virgil H. Crowder, Jr., M.D., Lawrenceburg, *Chairman*
Hollis H. Halford, M.D., Memphis
Duane C. Budd, M.D., Johnson City

REFERENCE COMMITTEE ON OUTSTANDING PHYSICIAN OF THE YEAR AWARD

David H. Turner, M.D., Chattanooga, *Chairman*
John B. Dorian, M.D., Memphis
James W. Hays, M.D., Nashville

Nominating Committee

As required in the By-Laws, the Board of Trustees, in its January meeting, appointed a Nominating Committee with representatives from each of the three grand divisions of the state. The speaker announced the personnel of the committee.

MIDDLE TENNESSEE

Clarence R. Sanders, M.D., Gallatin
George W. Holcomb, Jr., M.D., Nashville
James C. Bradshaw, Jr., M.D., Lebanon

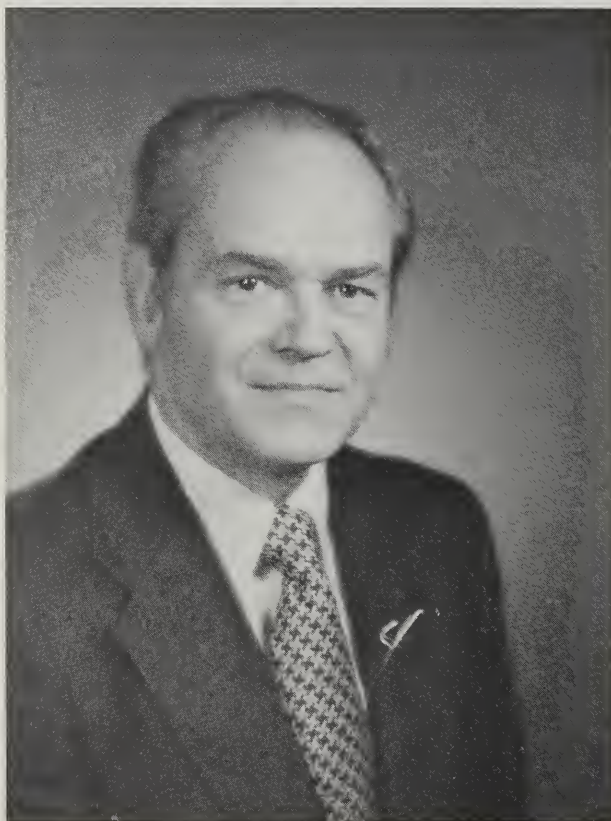
EAST TENNESSEE

E. Kent Carter, M.D., Kingsport
John H. Burkhart, M.D., Knoxville
David H. Turner, M.D., Chattanooga

WEST TENNESSEE

John B. Dorian, M.D., Memphis
Thomas K. Ballard, M.D., Jackson
J. Howard Ragsdale, M.D., Union City

ELECTION BY HOUSE OF DELEGATES APRIL 11, 1981



Newly elected President-Elect
George W. Holcomb, Jr., M.D., Nashville

The report of the Nominating Committee was presented in the second session of the House of Delegates on Saturday, April 11, 1981. Nominees submitted by the committee were voted upon individually, and in each instance, the speaker called for additional nominations from the floor. The following were elected:

President-Elect — George W. Holcomb, Jr., M.D., Nashville

Speake — Charles E. Allen, M.D., Johnson City

Vice Speaker — Malcolm R. Lewis, M.D., Nashville

Vice President (East Tennessee) — Hays Mitchell, M.D., Cleveland

Vice President (Middle Tennessee) — Charles E. Jordan, M.D., Cookeville

Vice President (West Tennessee) — Howard W. Thomas, M.D., Savannah

AMA Delegate (West Tennessee) — A. Roy Tyrer, Jr., M.D., Memphis (January 1, 1982-December 31, 1983)

AMA Alternate Delegate — John S. Derryberry, M.D., Shelbyville (January 1, 1982-December 31, 1983)

AMA Delegate (Middle Tennessee) — Charles B. Thorne, M.D., Nashville (April 11, 1981-December 31, 1983)

AMA Alternate Delegate (Middle Tennessee) — John B. Thomison, M.D., Nashville (April 11, 1981-December 31, 1983)

Fifth AMA Delegate (At Large) — Hamel B. Eason, M.D., Memphis (January 1, 1982-December 31, 1983)

Fifth AMA Alternate Delegate (At Large) — Clarence C. Woodcock, Jr., M.D., Nashville (January 1, 1982-December 31, 1983)

TRUSTEES

West Tennessee:

C. Eugene Jabbour, M.D., Memphis (1984)
Charles W. White, M.D., Lexington (1984)

Middle Tennessee:

Clarence R. Sanders, M.D., Gallatin (1984)

East Tennessee:

H. Trent Vandergriff, M.D., Maryville (1984)

COUNCILORS

Second District — John R. Nelson, Jr., M.D., Knoxville (1983)

Third District — Paul E. Hawkins, M.D., Chattanooga (1982) — Filling the unexpired term of Dr. William C. Patton who passed away in March.

Fourth District — Thurman L. Pedigo, M.D., McMinnville (1983)

Sixth District — Luther A. Beazley, Jr., M.D., Nashville (1983)

Eighth District — James T. Craig, Jr., M.D., Jackson (1983)

Tenth District — Phillip H. Dirmeyer, M.D., Memphis (1983)

NOMINEES FOR THE PUBLIC HEALTH COUNCIL

(Three from East Tennessee, one of whom will subsequently be appointed by the governor.)

David H. Turner, M.D., Chattanooga
James R. Royal, M.D., Chattanooga
Paul E. Hawkins, M.D., Chattanooga

(Three from Middle Tennessee, one of whom will subsequently be appointed by the governor.)

Robert W. Ikard, M.D., Nashville
Dan Sanders, M.D., Nashville
Kirkland W. Todd, M.D., Nashville

(Three from West Tennessee, one of whom will subsequently be appointed by the governor.)

James R. Appleton, M.D., Jackson
Rex A. Amonette, M.D., Memphis
Duval Koonce, M.D., Jackson

THE ABOVE WERE ELECTED BY THE HOUSE OF DELEGATES

Petition for New County Society Charter

At the first session the House of Delegates accepted a petition to form a new medical society that would be comprised of physicians practicing in Hamblen, Jefferson, Grainger and Hancock counties. At the second session a charter was granted to Lakeway Medical Society. The speaker stated a proper amendment had been introduced in the House to provide for the changes in the Constitution allowing for the Lakeway Medical Society to be included in Councilor District 2. David Greene, M.D., accepted the charter on behalf of Lakeway Medical Society and expressed appreciation for support of the new effort to strengthen the medical profession in their area.

AMENDMENTS TO THE CONSTITUTION AND BY-LAWS

The speaker reported that there were no amendments to the Constitution lying on the table to be considered at this session of the House.

The proposed amendments to the Constitution and By-Laws are shown below, with proposed new language shown in **boldface** type and material to be deleted shown in *italics* and enclosed in brackets.

AMENDMENTS TO THE CONSTITUTION

CA—NO. 1-81

Amend Article IV, Section 5 of the Constitution of the Tennessee Medical Association by inserting:

Sec. 5. **Special members are physicians who, having previously been active members, are granted this temporary status on the basis of special circumstances such as service with the National Health Service Corps, missionary or humanitarian assignments, maternity leave, or other circumstances that warrant special consideration. Eligibility for special membership shall be determined year to year, upon receipt of personal application of the physician or an active member representing the physician, by the Board of Trustees.**

(Renumber current Sections 5, 6, 7, and 8.)

Amend Article IV, Section 1 of the Constitution to reflect the new membership category as follows:

Section 1. This Association shall consist of Active members, Associate members, Veteran members, **Special members**, Honorary members. Intern and Resident members, and Student members.

REFERENCE COMMITTEE ON AMENDMENTS TO THE CONSTITUTION AND BY-LAWS—*recommended adoption of CA—No. 1-81.*

ACTION: Lying on the table to be acted upon during the House of Delegates session at the 1982 Annual Meeting

CA—NO. 2-81

Amend Article V of the Constitution of the Tennessee Medical Association as follows:

The House of Delegates shall be the legislative and business body of the Association, and shall consist of (1) delegates elected by the component societies; (2) *ex-officio* the Officers; (3) **Past-Presidents of the Association, providing they are members in good standing of the Tennessee Medical Association** [*the five most recent surviving Ex-Presidents of the Association, except that all Ex-Presidents who were living in April 1956 shall be members for life*]; (4) the Association's delegates to the American Medical Association; (5) the **general officers** [*elected officials*] of the American Medical Association, **members of councils elected by the AMA House of Delegates, and Past-Presidents of the American Medical Association**, provided such officials are members in good standing of the Tennessee Medical Association; (6) the Commissioner of Public Health and the Commissioner of Mental Health and **Mental Retardation** for the state of Tennessee, provided such officials are members in good standing of the Tennessee Medical Association; and (7) **the editor of the Journal of the Tennessee Medical Association.**

REFERENCE COMMITTEE ON AMENDMENTS TO THE CONSTITUTION AND BY-LAWS—*recommended adoption of CA—No. 2-81.*

ACTION: Lying on the table to be acted upon during the House of Delegates session at the 1982 Annual Meeting

CA—NO. 3-81

Amend Article VIII, Section 3, Paragraphs 2 and 3, of the Constitution of the Tennessee Medical Association as follows:

District No. 1: Carter, [*Claiborne*,] Cocke, [*Grainger*,] Greene, [*Hancock*,] Hawkins, Johnson, Sullivan, Unicoi, Washington.

District No. 2: Anderson, Blount, Campbell, **Claiborne**, Cumberland, **Grainger**, Hamblen, **Hancock**, Jefferson, Knox, Loudon, Morgan, Roane, Scott, Sevier, Union.

REFERENCE COMMITTEE ON AMENDMENTS TO THE CONSTITUTION AND BY-LAWS—*recommended adoption of CA—No. 3-81.*

ACTION: Lying on the table to be acted upon during the House of Delegates session at the 1982 Annual Meeting

CA—NO. 4-81

Amend Article VIII, Section 2 of the Constitution of the Tennessee Medical Association as follows:

Sec. 2. The Board of Trustees shall consist of the President of the Association, the Speaker of the House of Delegates, the Vice Speaker of the House of Delegates, the immediate Past-President, the President-Elect, and members elected by the House of Delegates as hereinafter provided.

Nine members of the Board of Trustees shall be elected by the House of Delegates, three from each grand division of the state. [*, and n*]

No more than two **Trustees may be** from any one component society.

The elected Trustees shall serve for a period of three years and no Trustee shall be eligible immediately to succeed himself, except that this provision shall not apply to a Trustee who by virtue of election or appointment has served any portion of another's unexpired term. The Board of Trustees will organize by the election of a Chairman and a Secretary-Treasurer from the nine elected as Trustees.

REFERENCE COMMITTEE ON AMENDMENTS TO THE CONSTITUTION AND BY-LAWS—*recommended nonadoption of CA—No. 4-81.*

ACTION: Lying on the table to be acted upon during the House of Delegates session at the 1982 Annual Meeting

AMENDMENTS TO THE BY-LAWS

BA—NO. 1-81

Amend Chapter I, Section 1 of the By-Laws to reflect the new membership category as follows:

Section 1. All Active members, Associate members, Veteran members, **Special members**, Intern and Resident

members, Student members, Honorary members, and invited guests shall be privileged to attend all scientific meetings and take part in the discussion of all scientific questions, but Active members and Veteran members, and Intern and Resident members only shall be entitled to vote and hold office.

Amend Chapter III, Section 1 of the By-Laws to reflect the new membership category as follows:

Section 1. The General Meeting shall include all registered Active members, Associate members, Veteran members, **Special members**, Intern and Resident members, Student members, Honorary members and guests, all of whom shall have equal rights to participate in the proceedings and discussions. Each General Meeting shall be presided over by the President, or, in his absence or disability, or by his request, by one of the Vice Presidents. Before it, at such time and place as may have been arranged, shall be delivered the annual address of the President and the annual orations; and the entire time of the meeting, so far as possible, shall be devoted to papers and discussions, clinics, and demonstrations, relating to scientific medicine.

REFERENCE COMMITTEE ON AMENDMENTS TO THE CONSTITUTION AND BY-LAWS—*recommended adoption of BA—No. 1-81 pending the adoption of CA—No. 1-81.*

ACTION: Lying on the table to be acted upon during the House of Delegates session at the 1982 Annual Meeting

BA—NO. 2-81

Amend Chapter V, Section 2 of the By-Laws as follows:

Sec. 2. On or before March 1st each year, preceding the annual session, the Board of Trustees shall consider the names of the members of the House of Delegates of the Association, and select nine delegates, from those eligible, to compose a Nominating Committee. The members of the Nominating Committee shall represent the three grand divisions of the state, with three members from East Tennessee, three members from Middle Tennessee and three members from West Tennessee. No two members of the Nominating Committee shall represent the same county medical society, **and no member shall serve more than five consecutive years.** The Executive Director of the Association shall notify the secretaries of all component medical societies of the names of members of the Nominating Committee, with the request that those members named to the Nominating Committee shall be made known to the membership of each of the component societies.

The Nominating Committee will be supplied, by the Board of Trustees, with the offices that are to be filled and elected by the House of Delegates. Any county medical society desiring to place the name of any physician in nomination for an office of the Tennessee Medical Association will have the opportunity to contact its representatives on the Nominating Committee.

It shall be the duty of the Nominating Committee to hold at least one meeting, prior to the opening session of the House of Delegates at a time and place designated by the President of the Association, elect a chairman and consider

candidates for offices to be filled. The committee shall report its selection of nominees to the House of Delegates. The Nominating Committee shall name at least one member for each of the offices to be filled at the general session.

REFERENCE COMMITTEE ON AMENDMENTS TO THE CONSTITUTION AND BY-LAWS—*recommended nonadoption of BA—No. 2-81.*

ACTION: NOT ADOPTED

BA—NO. 3-81

Amend Chapter XII, Section 3 of the By-Laws as follows:

Sec. 3. Every reputable physician who is legally licensed and registered in Tennessee, or any other state of the United States, who is practicing or who will agree to practice non-sectarian medicine, shall be eligible for membership. **Interns and residents serving in approved hospitals in Tennessee and in accordance with Tennessee Code Annotated 63-605(a), but who are not legally licensed and registered in Tennessee, shall also be eligible for membership.** Each component society shall judge the individual qualifications of its members. Only licensed and registered physicians who are Active, Veteran, or Intern or Resident members and who are members in good standing of the Tennessee Medical Association may be elected to office in a component society or to represent it in the House of Delegates of the Tennessee Medical Association. Each component society of this Association may amend its constitution and/or by-laws to provide that the payment of dues to the American Medical Association shall be a condition of Active membership in that society. Before a charter is issued to any component society, full and ample notice and opportunity shall be given to every such physician in the county to become a member.

REFERENCE COMMITTEE ON AMENDMENTS TO THE CONSTITUTION AND BY-LAWS—*recommended adoption of BA—No. 3-81.*

ACTION: ADOPTED

RESOLUTIONS

The reference committees have the option of recommending a resolution for adoption or rejection, for adoption as amended or substituted for referral, or for no action. The resolutions that follow are in the form in which they were **adopted, not adopted, or referred** by the House of Delegates. Two resolutions (Nos. 1-81 and 12-81) were withdrawn by their authors prior to introduction).

RESOLUTION NO. 2-81

Acupuncture

BY: ROBERT E. CLENDENIN, JR., M.D., CHAIRMAN
TMA BOARD OF TRUSTEES

WHEREAS, Resolution No. 15-73, adopted by the House of Delegates in 1973, will become void at the conclusion of the 1981 meeting unless reintroduced and reaffirmed; and

WHEREAS, The one resolve contained in Resolution No. 15-73 expresses a valid policy that should be continued by reaffirmation. Now therefore be it

RESOLVED, That until such time as a scientific basis for acupuncture has been developed, it be used only under controlled scientific studies or on an experimental basis with the knowledge and consent of the patient; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE B—*recommended adoption of Resolution No. 2-81.*

ACTION: ADOPTED

RESOLUTION NO. 3-81

Membership for Osteopaths

BY: ROBERT E. CLENDENIN, JR., M.D., CHAIRMAN
TMA BOARD OF TRUSTEES

WHEREAS, The American Medical Association admits to full active membership a person who possesses the degree of Doctor of Medicine or its equivalent or who possesses an unrestricted license to practice medicine and surgery; and

WHEREAS, Component medical societies of the Tennessee Medical Association are authorized to establish an affiliate membership category for health professionals other than physicians; and

WHEREAS, The Constitution of the Tennessee Medical Association defines "physician" as a person who having been regularly admitted to a medical school duly recognized in the country in which it is located, has successfully completed the prescribed course of studies in medicine, and has acquired the requisite qualifications to be legally licensed to practice medicine; and

WHEREAS, Tennessee Code Annotated repeatedly defines "physician" as a person licensed to practice medicine or osteopathy. Now therefore be it

RESOLVED, That the Committee on Constitution and By-Laws be directed to draft the necessary changes to the Constitution and By-Laws, for consideration by the House of Delegates in 1982 that will define "physician" in accordance with Tennessee Code Annotated; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE C—*recommended Resolution No. 3-81 be considered by the full House of Delegates on April 11.*

ACTION: NOT ADOPTED

RESOLUTION NO. 4-81

Health Care in Tennessee

BY: THURMAN L. PEDIGO, M.D.
WARREN COUNTY MEDICAL SOCIETY

WHEREAS, The hospital is the most expensive location for health care delivery; and

WHEREAS, Decreased financial incentive for hospitalization may be expected to decrease utilization of hospitalization as a source of health care. Now therefore be it

RESOLVED, That the Tennessee Medical Association recommend that the state of Tennessee Medicaid program, in order to place more incentive on outpatient care, implement a system of physician reimbursement at 100% of the current prevailing fee but not less than that of Medicare reimbursement for the state; and be it further

RESOLVED, That a copy of this resolution be forwarded to the commissioner of public health of the state of Tennessee; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE A—*recommended incorporating Resolution No. 4-81 with Resolution No. 8-81; recommended adoption of Resolution No. 4-81 as amended.*

ACTION: **ADOPTED AS AMENDED**

RESOLUTION NO. 5-81

Cost Containment of Health Care in Tennessee

BY: THURMAN L. PEDIGO, M.D.
WARREN COUNTY MEDICAL SOCIETY

WHEREAS, The hospital is the most expensive location for health care delivery; and

WHEREAS, Inpatient hospital care constitutes the largest portion of our health care budget; and

WHEREAS, The financial burden of purchasing health care is related to the total financial outlay rather than the geographic location of the service; and

WHEREAS, Many insurance policies fail to provide outpatient diagnostic and treatment coverage thereby placing a financial incentive on the policyholder and physician for hospitalization. Now therefore be it

RESOLVED, That the Tennessee Medical Association support programs of an insurance system placing more emphasis on outpatient care programs and support programs of co-payment; and be it further

RESOLVED, That the commissioner of insurance for the state of Tennessee be informed of this position and requested to encourage the health industry in Tennessee to acknowledge this concept; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE C—*offered Substitute Resolution No. 5-81 in place of original Resolution No. 5-81; recommended adoption of Substitute Resolution No. 5-81.*

ACTION: **ADOPTED**

RESOLUTION NO. 6-81

Health Care in Tennessee

BY: THURMAN L. PEDIGO, M.D.
WARREN COUNTY MEDICAL SOCIETY

WHEREAS, The free enterprise system has been found to be the most effective in cost containment in the marketplace; and

WHEREAS, Regulations prohibit the effectiveness of the marketplace of the free enterprise system in cost containment; and

WHEREAS, The Tennessee Medicaid program with requirements for frequent prescription refills for the past several years has created excessive cost of the system; and

WHEREAS, An effective system utilizing the physician, the pharmacist, and the patient as a team may be expected to achieve a more economical pharmacy program. Now therefore be it

RESOLVED, That the Tennessee Medical Association recommend a deregulation of the pharmacy program of the state of Tennessee from the standpoint of setting any specific limit or requirement on the number of prescriptions per patient in the program; and be it further

RESOLVED, That the Tennessee Medical Association support the concept of the Medicaid program developing a peer review committee to help improve the efficiency of the pharmacy program; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE A—*recommended adoption of Resolution No. 6-81 as amended.*

ACTION: **ADOPTED AS AMENDED**

RESOLUTION NO. 7-81

Health Care in Tennessee

BY: THURMAN L. PEDIGO, M.D.
WARREN COUNTY MEDICAL SOCIETY

WHEREAS, Operation of the clerical system constitutes approximately 50% of the overhead of many physicians' offices; and

WHEREAS, This overhead is passed on to the consumer in health care costs; and

WHEREAS, This increased cost is ultimately passed on to the Medicaid program in terms of escalation of the fee profiles; and

WHEREAS, The amount of work for filing a small claim of \$10-\$25 is as much as for filing a larger claim of \$500 under the present Medicaid system of filing for reimbursement; and

WHEREAS, It could be anticipated that improvement in the method of filing for reimbursement may increase provider participation in the program. Now therefore be it

RESOLVED, That the Tennessee Medical Association recommend the study and development of a more efficient method of filing for reimbursement for outpatient visits; and be it further

RESOLVED, That a copy of this resolution be submitted

to the commissioner of public health of the state of Tennessee, and a copy be forwarded to the governor of the state of Tennessee; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE A—*recommended adoption of Resolution No. 7-81 as amended.*

ACTION: **ADOPTED AS AMENDED**

RESOLUTION NO. 8-81

Health Care in Tennessee

BY: THURMAN L. PEDIGO, M.D.
WARREN COUNTY MEDICAL SOCIETY

WHEREAS, Substandard levels of reimbursement for services tend to inhibit provider participation in the Medicaid program; and

WHEREAS, An improvement in the present level of reimbursement of the Medicaid program to the current Medicare level may be expected to increase provider participation if Medicaid reimbursements remain at this level. Now therefore be it

RESOLVED, That the Tennessee Medical Association recommend that the level of Medicaid reimbursement be advanced to no less than that of the Medicare reimbursement for the state of Tennessee; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE A—*recommended incorporating Resolution No. 8-81 with Resolution No. 4-81.*

ACTION: **NOT ADOPTED (Was combined with Resolution No. 4-81, which was adopted as amended.)**

RESOLUTION NO. 9-81

Health Care in Tennessee

BY: THURMAN L. PEDIGO, M.D.
WARREN COUNTY MEDICAL SOCIETY

WHEREAS, A complete financial statement, including resources for paying for health care, should be obtained and kept current on all Medicaid recipients; and

WHEREAS, The state has a vested interest in recovering from such resources if they are available; and

WHEREAS, The physician's office many times has limited access to this health care resource information. Now therefore be it

RESOLVED, That the Tennessee Medical Association support the concept of the Tennessee Medicaid program recovering directly from any third party resource for health care benefits to Medicaid recipients if third party recovery is not indicated on the claim for reimbursement; and be it further

RESOLVED, That this resolution, unless reaffirmed or

modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE A—*recommended adoption of Resolution No. 9-81.*

ACTION: **ADOPTED**

RESOLUTION NO. 10-81

Assessment of Membership

BY: JOHN H. BURKHART, M.D., PRESIDENT
TENNESSEE MEDICAL ASSOCIATION-STUDENT EDUCATION FUND

WHEREAS, In 1962 the House of Delegates of the Tennessee Medical Association authorized the establishment of the Tennessee Medical Association-Student Education Fund (TMA-SEF) for the purpose of assisting Tennessee medical students who were enrolled in or accepted by a Tennessee medical school, and who were in dire need of financial assistance; and

WHEREAS, Since the inception of the program a total of 186 student loans have been approved representing an outlay of \$258,643; and

WHEREAS, Principal funding for this program continues to come in the form of interest-free loans from the Tennessee Medical Association; and

WHEREAS, Additional revenue from an anonymous philanthropic organization was received for a number of years, thereby allowing the fund to maintain sufficient assets to meet requests until the grants were terminated two years ago; and

WHEREAS, With the termination of outside funding and with the rapid diminishing of the availability of federal loans programs as well as nongovernmental sources and an anticipated increase in tuition of up to 50% for medical students beginning next term is almost certain to create a deluge of new applications for financial assistance from TMA-SEF; and

WHEREAS, Repeated efforts on the part of the TMA-SEF board of directors to secure funds from county medical societies as well as from individual physicians have met with only minimal response; and

WHEREAS, It is the desire of the board of directors of the TMA-SEF to put the fund on a firm financial base without continually requesting interest-free loans from the TMA treasury, thereby causing the Association to actually lose money on funds set aside for student loans. Now therefore be it

RESOLVED, That the House of Delegates of the Tennessee Medical Association authorize a \$10 per member annual assessment for a period of five years beginning with the 1982 billing for the sole purpose of creating capital for the TMA-SEF; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE B—*recommended adoption of Resolution No. 10-81.*

ACTION: **ADOPTED**

RESOLUTION NO. 11-81

Tennessee Medical Association Auxiliary

BY: ROBERT E. CLENDENIN, JR., M.D., CHAIRMAN
TMA BOARD OF TRUSTEES

WHEREAS, The Tennessee Medical Association's Annual Meeting continues to grow in attendance; and

WHEREAS, Part of that attendance is attributed to the growth of the TMA Auxiliary; and

WHEREAS, The TMA Auxiliary is an integral part of the Association and meets annually in conjunction with the TMA; and

WHEREAS, The TMA Auxiliary has been meeting in separate facilities during the convention; and

WHEREAS, This presents travel problems for the Auxiliary members attending with their husbands and prohibits joint functions with the TMA members. Now therefore be it

RESOLVED, That in future planning, only those cities within the state be considered in which adequate convention and/or hotel facilities are available wherein both the TMA and the TMA Auxiliary can meet within a reasonable proximity of each other; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE D—*recommended adoption of Resolution No. 11-81.*

ACTION: ADOPTED

RESOLUTION NO. 13-81

Guiding Principles Regarding Delivery of Medical Care Services

BY: NAT E. HYDER, JR., M.D., CHAIRMAN
TMA JUDICIAL COUNCIL

WHEREAS, The number of parties, public and private, which profess interest in the efficient delivery of high-quality medical care to all persons living in Tennessee is increasing year by year; and

WHEREAS, It is recognized that each of these interested parties must actively seek and maintain close communication and consultation with the others if the common goal is to be pursued cooperatively and for the benefit of all people; and

WHEREAS, The practicing doctor of medicine, duly licensed, is the prime deliverer of patient care in Tennessee today and, hence, is intensely interested in all proposals that may be advanced as possible methods of improving the health care system, whether such proposals are initiated by his own professional organizations or by other interested parties; and

WHEREAS, Independent or unilateral actions proposed or implemented in this field by legislators, so-called consumer groups and/or health planning agencies that do not take into full account the opinions and professional expertise in patient care of practicing physicians are prone to be theoretical in concept and not in keeping with time-tested medical principles which have received wide public accep-

ance; and

WHEREAS, The Tennessee Medical Association is the representative professional organization of some 5,000 licensed Tennessee physicians, approximately 85% of whom are engaged in the private practice of medicine. Now therefore be it

RESOLVED, That the House of Delegates of the Tennessee Medical Association reaffirm certain basic principles regarding the delivery of high-quality medical care, as follows:

1. That communication and consultation with the Association be readily available at all times to all responsible parties having an interest in matters relating to the delivery of medical care services and to the public health.

2. That medical care of uniformly high quality be available to all persons living in Tennessee.

3. That the maintenance of high quality in medical care is of paramount importance, and that all other considerations are secondary to this goal.

4. That each practitioner, as an individual, is directly accountable for his professional acts and deportment to his patients, to his medical peers and to authorized licensing agencies, and that the public interest is well protected by such accountability; further, that lay (nonphysician) control of, or interference with, professionally approved medical care policies and ethical practices is contrary to the public interest and should be prohibited at all levels of government.

5. That patients have the freedom of choice in choosing their physician(s) or their health care delivery system, and physicians have freedom of choice in accepting patients except in emergency situations, and that assignment by any third party of patient to physician or physician to patient without freedom of choice is in violation of this principle and cannot be approved; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE C—*recommended adoption of Resolution No. 13-81 as amended.*

ACTION: ADOPTED AS AMENDED

RESOLUTION NO. 14-81

Corporate Practice and Separate Billing By Hospital-Based Physicians

BY: NAT E. HYDER, JR., M.D., CHAIRMAN
TMA JUDICIAL COUNCIL

WHEREAS, The Tennessee Medical Association's Judicial Council has diligently sought to uphold the laws of the state of Tennessee, and the Principles of Medical Ethics of the American Medical Association; and

WHEREAS, The Judicial Council of the Tennessee Medical Association has sponsored resolutions in this House that previously pertained to the corporate practice of medicine, these resolutions having been adopted as policy; and

WHEREAS, There are some hospital-based physician members of the Tennessee Medical Association who are not yet billing separately for their services; and

WHEREAS, It is ethical and legal for hospitals to serve as billing and collecting agents for physicians; and

WHEREAS, It is ethical and legal for hospitals to pay physicians a salary for administrative services (supervising or directing Departments of Radiology, Pathology, Anesthesiology, Cardiology and Emergency Rooms, etc.); and

WHEREAS, It is ethical and legal for the medical staff of the hospital to form itself together into a professional association or corporation for the purpose of employing licensed physicians to render emergency services in the hospital (the physicians could be employees or agents of the staff rather than the hospital). Now therefore be it

RESOLVED, That members of the Tennessee Medical Association shall observe the Principles of Medical Ethics of the American Medical Association as they pertain to separate billing and the law of the state of Tennessee regarding the corporate practice of medicine; and be it further

RESOLVED, That the following guidelines be adopted as policy of this Association: (1) Licensed physicians staffing emergency rooms in hospitals must charge for their medical services and shall bill their patients for services. (2) Physicians' services shall be billed separately from hospital services. (3) Hospitals may serve as billing or collecting agents for physicians. (4) Physicians may pay hospitals reasonable compensation for the hospital's services as a billing or collecting agent. (5) Hospitals may pay physicians' salaries or *guarantee minimum salaries* for hospital administrative services, supervisory responsibilities, educational activities and physical presence; and be it further

RESOLVED, That separate billing be defined as any billing that (1) identifies the physician(s) who rendered services, and (2) identifies the fee(s) charged by the physician(s) for said services as line items separate from other charges appearing on the same bill, and (3) clearly states that the billing agent (hospital or other) is billing for the physician at his request and on his instruction; and be it further

RESOLVED, That residents in training programs in Tennessee be informed of the position of the Tennessee Medical Association regarding separate billing; and be it further

RESOLVED, That a copy of this resolution be sent to the Tennessee Hospital Association; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE C—*offered Substitute Resolution No. 14-81 in place of original Resolution No. 14-81 and recommended incorporating Resolution No. 15-81 with Substitute Resolution No. 14-81; recommended adoption of Substitute Resolution No. 14-81.*

ACTION: ADOPTED AS AMENDED

RESOLUTION NO. 15-81

Separate Billing By Physicians

BY: NAT E. HYDER, JR., M.D., CHAIRMAN
TMA JUDICIAL COUNCIL

WHEREAS, This House of Delegates has previously established policy with regard to separate billing by physi-

cians; and

WHEREAS, The Judicial Council now reaffirms its position that the principles and guidelines quoted herein are consistent with the Principles of Medical Ethics of the American Medical Association and the Tennessee Medical Association policy. Now therefore be it

RESOLVED, That the following guidelines be adopted as policy of this Association: (1) Licensed physicians staffing emergency rooms in hospitals must charge for their medical services and shall bill their patients for such services. (2) Physicians' services shall be billed separately from hospital services. (3) Hospitals may serve as billing or collecting agents for physicians. (4) Physicians may pay hospitals reasonable compensation for the hospital's services as a billing or collecting agent. (5) Hospitals may pay physicians' salaries for hospital administrative services, supervisory responsibilities, educational activities and physical presence; and be it further

RESOLVED, That separate billing be defined as any billing that (1) identifies the physician(s) who rendered services, and (2) identifies the fee(s) charged by the physician(s) for said services as line items separate from other charges appearing on the same bill, and (3) clearly states that the billing agent (hospital or other) is billing for the physician(s) at his request and on his instruction; and be it further

RESOLVED, That residents in training programs in Tennessee be informed of the position of the Tennessee Medical Association regarding separate billing; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE C—*recommended incorporating Resolution No. 15-81 with Substitute Resolution No. 14-81.*

ACTION: NOT ADOPTED (Was combined with Substitute Resolution No. 14-81, which was adopted as amended.)

RESOLUTION NO. 16-81

Clean Air Act

BY: E. HARRIS PIERCE, M.D.
BRADLEY COUNTY MEDICAL SOCIETY

WHEREAS, Preventive medicine is an important aspect of patient care and a responsibility of the physician to his patient; and

WHEREAS, Physicians and most people are well aware that smoking is one of our nation's most serious preventable health hazards; and

WHEREAS, The National Cancer Institute, the American Lung Association, the American Academy of Family Physicians and the Office on Smoking and Health have developed special individual and community programs to aid the cessation of smoking; and

WHEREAS, The primary and secondary inhalation of tobacco smoke is a known irritant which produces harmful effects on the human body; and

WHEREAS, There is overwhelming evidence that smok-

ing is related to cancer of the lung, emphysema, heart and stomach trouble, cancer to the bladder and many other diseases; and

WHEREAS, The cost of smoking to society has been estimated to be \$27,600,000 annually; and

WHEREAS, Alaska, Arkansas, California, Colorado, Connecticut, Florida, Hawaii, Iowa, Kansas, Maryland, Massachusetts, Michigan, Minnesota, Montana, Nebraska, Nevada, New Hampshire, New York, North Dakota, Oklahoma, Oregon, Rhode Island, South Dakota, Texas and Utah have passed Clean Air Acts protecting their citizens as much as possible from this hazard; and

WHEREAS, The Tennessee Medical Association's House of Delegates passed Resolution No. 9-80 recommending restricted areas for sale and use of tobacco in hospitals. Now therefore be it

RESOLVED, That physicians personally reevaluate their position in relationship to smoking; and be it further

RESOLVED, That the Tennessee Medical Association encourage members who smoke to stop as an example to patients; and be it further

RESOLVED, That the Tennessee Medical Association through its various publications and communications remind all members of the hazards and dangers to the human body; and be it further

RESOLVED, That the Tennessee Medical Association establish a committee to study the feasibility of establishing a special statewide community program to inform all citizens about this critical health issue; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE B—*recommended adoption of Resolution No. 16-81 as amended.*

ACTION: ADOPTED AS AMENDED

RESOLUTION NO. 17-81

Elimination of Professional Standards Review Organizations (PSROs)

BY: JAMES T. GALYON, M.D.

MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

WHEREAS, Professional Standards Review Organizations (PSROs) under P.L. 92-603 have not proved effective in controlling health care costs and, according to recent studies, have actually increased health care spending rather than reducing it; and

WHEREAS, The House of Delegates of the American Medical Association at its Interim Meeting on December 7-10, 1980 in San Francisco adopted as policy "to continue professionally directed efforts to ensure the care provided to patients is of high quality, appropriate duration, and is rendered in an appropriate setting at a reasonable cost and to encourage the elimination of all government directed peer review programs including PSRO"; and

WHEREAS, President Reagan has proposed that all federal funding for PSROs be phased out over a period of 1981-1983 which would reduce the federal budget by \$38

million in 1981, \$136 million in 1983, and \$238 million in 1986. Now therefore be it

RESOLVED, That the Tennessee Medical Association strongly urge the cessation of funding for PSROs and the introduction and adoption of legislation in the 97th Congress to eliminate PSROs by repealing P.L. 92-603; and be it further

RESOLVED, That every member of the Tennessee congressional delegation be encouraged to actively support and implement the objectives of the above resolve; and be it further

RESOLVED, That the medical profession in this state, through existing hospital and medical society utilization review and peer review committees, continue in its efforts to ensure the care provided to patients is of high quality, appropriate duration, and is rendered in an appropriate setting at a reasonable cost; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE A—*recommended adoption of Resolution No. 17-81; recommended substituting for Resolution No. 20-81.*

ACTION: ADOPTED

RESOLUTION NO. 18-81

Eradication of Federal Subsidies for Group, Prepaid Health Care

BY: JAMES T. GALYON, M.D.

MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

WHEREAS, Federal programs that subsidize group, prepaid health care, i.e., Health Maintenance Organizations (HMOs), are contrary to the principles of free enterprise and fair market competition; and

WHEREAS, More than half of the federally funded HMOs in the country have either gone out of business in the past two years or are experiencing serious financial problems; and

WHEREAS, The House of Delegates of the American Medical Association at its Interim Meeting on December 7-10, 1980 in San Francisco adopted as policy that "the potential growth of HMOs be determined not by federal subsidy, preferential federal regulations, and federal advertising promotion, but by the number of people who prefer this mode of delivery"; and

WHEREAS, President Reagan has proposed that HMO funding be phased out with no new federal grants or loans, which would reduce the federal budget by \$37 million in 1981, \$57 million in 1983, and \$72 million in 1986. Now therefore be it

RESOLVED, That the Tennessee Medical Association strongly urge the eradication of federal subsidies for group, prepaid health care, i.e., HMOs, and the introduction and adoption of legislation in the 97th Congress to terminate the federal HMO program; and be it further

RESOLVED, That every member of the Tennessee congressional delegation be encouraged to actively support and

implement the objectives of the above resolve; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE A—*recommended adoption of Resolution No. 18-81; recommended substituting for Resolution No. 21-81.*

ACTION: ADOPTED

RESOLUTION NO. 19-81

Repeal of Health Planning Laws (P.L. 93-641 and P.L. 96-79)

BY: JAMES T. GALYON, M.D.

MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

WHEREAS, Health Systems Agencies (HSAs), certificate of need, and other federal regulatory mechanisms imposed on the private sector by current health planning laws (P.L. 93-641 and P.L. 96-79) have not proved effective in controlling health care costs, and have inhibited free market forces needed to strengthen competition and provide less costly medical services; and

WHEREAS, The House of Delegates of the American Medical Association at its Interim Meeting on December 7-10, 1980 in San Francisco adopted a resolution calling for the immediate cessation of funding for P.L. 93-641 and P.L. 96-79, and the introduction of legislation in the 97th Congress to repeal these laws; and

WHEREAS, President Reagan has proposed that all federal funding for health planning be phased out over a period of 1981-1983 which would reduce the federal budget by \$28 million in 1981, \$168 million in 1983, and \$199 million in 1986; and

WHEREAS, Health planning should be a voluntary, locally based program designed to address local needs with local resources. Now therefore be it

RESOLVED, That the Tennessee Medical Association strongly urge the cessation of funding for P.L. 93-641 and P.L. 96-79, and the introduction and adoption of legislation in the 97th Congress to repeal these laws; and be it further

RESOLVED, That every member of the Tennessee congressional delegation be encouraged to actively support and implement the objectives of the above resolve; and be it further

RESOLVED, That the medical profession in this state, through the Tennessee Medical Association and its component societies, accept the responsibility of leadership in providing a voluntary, locally based health planning program; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE A—*recommended adoption of Resolution No. 19-81.*

ACTION: ADOPTED

RESOLUTION NO. 20-81

Repeal Government Policing of Medical Treatment (PSRO)

BY: THOMAS G. DORRITY, M.D.

MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

WHEREAS, Optimum patient medical care requires the highest degree of confidence and trust between patient and physician which cannot be attained when there is interference with the judgment of the physician; and

WHEREAS, Federal government agents (primarily non-doctors) are interfering between the patient and physician by telling patients whether they may go to the hospital and for how long and for what treatment, frequently contrary to the best judgment of the attending physician's advice to the patient; and

WHEREAS, The aforesaid federal government interference, authorized by P.L. 92-603, entitled Professional Standards Review Organization (PSRO), is an elaborately hidden scheme giving control over medical decisions to the Secretary of HHS who is of necessity a politician; and

WHEREAS, In the case of *AAPS v. Weinburger* challenging the constitutionality of this policing system, the Justice Department successfully argued that "patients . . . whose medical care is provided by public funds have no constitutional right . . . to obtain . . . care 'from a physician . . . of their choice'"; and

WHEREAS, A nationwide federally financed bureaucracy to police attending physicians' judgments is costing much more than it saves and is causing a deterioration in the quality of medical care by violating confidential information and otherwise driving a wedge between patient and physician. Now therefore be it

RESOLVED, That we, the Tennessee Medical Association, urge (1) the Department of Health and Human Services to recommend to Congress that the police physician law, P.L. 92-603, be repealed, and (2) that Congress act favorably on such recommendation; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE A—*recommended nonadoption of Resolution No. 20-81; recommended Resolution No. 20-81 be substituted by Resolution No. 17-81.*

ACTION: NOT ADOPTED (Was substituted by Resolution No. 17-81, which was adopted.)

RESOLUTION NO. 21-81

The HMO Subsidy Threat

BY: THOMAS G. DORRITY, M.D.

MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

WHEREAS, So-called Health Maintenance Organization is a new term for the old scheme of prepaid, per capita closed panel group practice which is the basic scheme of the British National Health Service; and

WHEREAS, HMOs have not demonstrated that they are more effective but leave the impression they are by only enrolling the healthier age groups and segments of the population, and skimping on services; and

WHEREAS, Even though the unit cost of medical care is not lower for HMOs and premiums are higher than for conventional health insurance; and

WHEREAS, This type of organization depends for its success on physicians rationing hospitalization and medical care, thereby creating a conflict of interest between physician and patient; and

WHEREAS, Patients bear the brunt of any losses in the form of reduced services, or higher premium payments, or both; and

WHEREAS, Many HMOs relying upon subsidies from government have incurred prohibitively high administrative expenses. Now therefore be it

RESOLVED, That we, the Tennessee Medical Association, oppose this form of medical organization particularly when it is subsidized by government making it against the interest of both patients and physicians; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE A—*recommended nonadoption of Resolution No. 21-81; recommended Resolution No. 21-81 be substituted by Resolution No. 18-81.*

ACTION: NOT ADOPTED (Was substituted by Resolution No. 18-81, which was adopted.)

RESOLUTION NO. 22-81

The Catastrophic Subsidy Threat

BY: THOMAS G. DORRITY, M.D.

MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

WHEREAS, Private catastrophic health insurance has not been voluntarily purchased by everyone even though it is readily available if an individual is willing to pay for it; and

WHEREAS, Proponents of catastrophic insurance want the federal government by some device to see that "all Americans" have such insurance even if by "requiring employers to provide it for employees and their dependents" and/or if need be by "a federal subsidy"; and

WHEREAS, The proponents claim their proposals would not cost the government much because the individual or his family would be required to pay a deductible of various amounts (i.e., \$2,500 to \$3,500 a year); and

WHEREAS, Should such a proposal become law, proponents of nationalized medicine would immediately propagandize and press eliminating the deductible resulting in the federal government assuming responsibility for everyone's medical care which is preposterous. Now therefore be it

RESOLVED, That since this country is already grievously suffering from cruel inflation, and all schemes by the federal government to see that everyone has catastrophic

insurance require using federal force (with or without subsidies), we, the Tennessee Medical Association, oppose national catastrophic health insurance in any form; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE A—*recommended nonadoption of Resolution No. 22-81.*

ACTION: NOT ADOPTED

RESOLUTION NO. 23-81

Procompetition Regulation Threat

BY: THOMAS G. DORRITY, M.D.

MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

WHEREAS, Demand for medical services has been greatly increased by federal and state government spending, authorized by Medicare and Medicaid in 1975; and

WHEREAS, This demand is artificial because it promises millions of patients medical services at considerably less than cost or at no charge to the patient; and

WHEREAS, Such artificial demand has greatly increased the cost for hospital and doctor services for everyone, including private patients as well as welfare patients; and

WHEREAS, Advisors to politicians do not have the knowledge and courage to advise removal of the true cause of the problem—politically created artificial demand; and

WHEREAS, Advisors to politicians confuse the issue by blaming the deductibility of insurance premiums under the tax law, instead of the true cause—artificial demand through Medicare and Medicaid; and

WHEREAS, Advisors to politicians are avoiding the issue by advocating substitute gimmicks called "procompetition" legislation that would use federal power to force employers to give employees government-decreed benefits; and

WHEREAS, Such gimmicks are enticingly and deceptively called "consumer choice health plans"; and

WHEREAS, Such plans cover practically every citizen regardless of income, even going so far as to issue cash vouchers to nontaxpayers which would require direct subsidies and an army of bureaucratic administrators to police the program; and

WHEREAS, Such plans require "catastrophic" health insurance protection. Now therefore be it

RESOLVED, That we, the Tennessee Medical Association, oppose so-called procompetition schemes forcing employers to provide medical insurance to employees on terms dictated by the federal government; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE A—*recommended adoption of Resolution No. 23-81.*

ACTION: ADOPTED

RESOLUTION NO. 24-81

Get Government Out of Medicine, Not Further In

BY: THOMAS G. DORRITY, M.D.

MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

WHEREAS, President Reagan has warned that "By going outside its proper province, as it has, government has already done too much. Government is not the answer. Government is the problem"; and

WHEREAS, A group of conservative Democrats and most Republicans are well aware that the number one domestic problem is inflation and that inflation should be the number one priority of the 97th Congress; and

WHEREAS, There are statements being made by Republicans in positions of influence advocating new federal government subsidy and control programs in medicine; and

WHEREAS, Such additional government initiatives use the alluring, simplistic and deceptive language of the centralizers of power in government such as "tax dollars must be spent to help those who need help for basic and catastrophic illness protection"; and

WHEREAS, Experience shows that the federal government has done too much in subsidization and control of medical care and has been a prime cause of inflation that has created severe hardships which are undermining the stability of the nation. Now therefore be it

RESOLVED, That we, the Tennessee Medical Association, oppose any new federal programs in medicine; and be it further

RESOLVED, That we favor working government out instead of further into subsidizing and controlling medical care; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE A—*recommended adoption of Resolution No. 24-81 as amended.*

ACTION: ADOPTED AS AMENDED

RESOLUTION NO. 25-81

Principles of Medical Ethics

BY: THOMAS G. DORRITY, M.D.

RESOLVED, That the Tennessee Medical Association adopt the following Principles of Medical Ethics:

PREAMBLE—Being aware that a physician's religious and moral principles are the source of his ethical behavior, this Association adopts the following principles of professional conduct. The principle objective of the *ethical* physician in his practice is to treat human illness while maintaining the highest respect for the dignity of his patient.

1. The physician's first professional obligation is to his patient, then to his profession. His ethical obligation to his community is the same as that of any other citizen.

2. The physician *should* conduct himself at all times with the dignity, integrity, honesty and diligence in the practice of his profession which will *engender* the confidence of his

patients and respect of his colleagues.

3. The physician *should* not condone the taking of human life in the practice of his profession, but should at all times respect the sanctity of human life and seek to preserve or improve the quality of life.

4. The physician *should not dispose of his services under terms or conditions which tend to interfere with or impair free and complete exercise of his medical judgment and skill or tend to cause a deterioration of the quality of medical care.*

5. The physician may choose whom he will treat, but having undertaken the care of a patient, he *should* not discontinue his care without adequate notice.

6. The physician *should* limit the source of his professional income to medical services actually rendered by him, or under his supervision, to his patients. He *should* neither pay nor receive a commission for referral of patients. The value of professional services should be determined only by mutual agreement between physician and patients, and in no other way.

7. The physician *should* personally counsel another practitioner who behaves incompetently or unethically and report persistence of that conduct to the proper authority.

8. The physician *should* seek advice and consultation with ethical colleagues whenever the quality of medical care may be enhanced or whenever consultation is requested by the patient.

9. The special importance of the patient's privacy in medical matters requires that the physician never reveal either the confidences entrusted to him in the course of medical attendance, or deficiencies he may observe in the character of the patient, releasing information only with consent of the patient and with due consideration of the mandate of law.

10. The physician *should* constantly seek factual and reliable information that will assist him in the treatment of illness.

11. The physician *should* not solicit patients. Professional reputation is the major source of patient referral. The physician *should* be circumspect and restrained in dealing with the communication media, always avoiding self-aggrandizement; and be it further

RESOLVED; That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE C—*recommended nonadoption of Resolution No. 25-81.*

ACTION: NOT ADOPTED

RESOLUTION NO. 26-81

Principles of Medical Ethics

BY: THOMAS G. DORRITY, M.D.

MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

WHEREAS, A code of ethics is a moral code and not a set of laws; and

WHEREAS, A moral code should not be breached for the sake of accommodating governmental and bureaucratic pressures; and

WHEREAS, The action of the annual meeting of the House of Delegates of the American Medical Association in adopting a greatly changed "Principles of Medical Ethics" essentially abolishes a long established moral code in favor of an unknown quantity to be proclaimed by federal bureaucracy. Now therefore be it

RESOLVED, That the Tennessee Medical Association's House of Delegates strongly urge reconsideration of the recently adopted Principles of Medical Ethics of the American Medical Association to include Section 6 (The physician should not dispose of his services under terms or conditions which tend to interfere with or impair free and complete exercise of his medical judgment and skill or tend to cause a deterioration of the quality of medical care.) of the previous Principles of Medical Ethics of the American Medical Association; and be it further

RESOLVED, That the TMA delegates to the American Medical Association be instructed to work toward achieving inclusion of Section 6 in the current American Medical Association's Principles of Medical Ethics; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE C—*offered Substitute Resolution No. 26-81 in place of original Resolution No. 26-81; recommended adoption of Substitute Resolution No. 26-81.*

ACTION: ADOPTED

RESOLUTION NO. 27-81

Generic Drug Substitution

TENNESSEE SOCIETY OF INTERNAL MEDICINE

WHEREAS, The substitution of a generic drug for its equivalent brand-name drug can result in substantial savings with no harm to patients when therapeutic equivalence can be demonstrated using, among other scientific evidence, bioavailability studies; and

WHEREAS, Organized medicine has a commitment to making the lowest priced prescription products available to the public, while preserving the physician's prerogative and responsibility in drug product selection; and

WHEREAS, The Tennessee Legislature has enacted the Tennessee Generic Drug Substitution Act of 1977 (TCA 52-1221 through 52-1226) which fulfills these requirements; and

WHEREAS, The Tennessee Department of Public Health presently utilizes the resources of the University of Tennessee Center for the Health Sciences in determining the therapeutic equivalence of generic drugs using scientific evidence based on bioavailability studies. Now therefore be it

RESOLVED, That the Tennessee Medical Association's House of Delegates endorse the principles of generic substitution providing that the legislation governing such substitution includes the "two line" prescription format; and the passing of savings to consumers by pharmacists; and the use of scientific evidence based on bioavailability studies to determine therapeutic equivalence; and be it further

RESOLVED, That the Tennessee Department of Public Health be requested and encouraged to consult with an ap-

propriate Tennessee Medical Association committee before designating any drug as "therapeutically equivalent"; and be it further

RESOLVED, That the Tennessee Medical Association undertake to improve physician understanding of the method of development of the Tennessee Generic Drug List, encourage its use, and publish periodically in the Tennessee Medical Association's Newsletter and *Journal* updated lists of the drugs which the Tennessee Department of Public Health, with the concurrence of the Tennessee Medical Association, has designated as therapeutically equivalent; and be it further

RESOLVED, That the Tennessee Medical Association vigorously oppose any efforts to remove the physician's prerogative in prescribing medications or any efforts to circumvent the current statutory requirement for "scientific evidence . . . based on . . . bioavailability studies" in determining the therapeutic equivalence of generic drugs; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE B—*recommended adoption of Resolution No. 27-81 as amended.*

ACTION: ADOPTED AS AMENDED

RESOLUTION NO. 28-81

Reduced Dues for Members in Their First Year of Practice

RONALD E. OVERFIELD, M.D.
NASHVILLE ACADEMY OF MEDICINE

WHEREAS, The American Medical Association and 32 state and territorial medical associations have implemented a reduced dues schedule for members in their first year of practice; and

WHEREAS, 142 of the 177 county medical societies responding to a recent American Medical Association survey have also adopted a reduced dues schedule for members in their first year of practice; and

WHEREAS, The American Medical Association conducted extensive research itself and also commissioned a private research organization to evaluate the positive impact on membership recruitment from a reduced dues policy for new members prior to implementation of the policy and recommendation to state and county medical associations. Now therefore be it

RESOLVED, That the House of Delegates of the Tennessee Medical Association approve a 50% dues reduction for members in their first year of practice. The term "first year of practice" is interpreted as that period of time one year after completion of residency or internship; and be it further

RESOLVED, That the eligibility requirements for reduced dues and the billing schedule should comply with AMA interpretation; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE C—*recommended adoption of Resolution No. 28-81 as amended.*

ACTION: **ADOPTED AS AMENDED**

RESOLUTION NO. 29-81

Opposition to "Usual, Customary and Reasonable"

BY: MCCARTHY DEMERE, M.D.

MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

WHEREAS, Insurance carriers who send communications to patients stating that medical fees charged by their physicians were above the usual, customary and reasonable charges are inflammatory; and

WHEREAS, These inflammatory statements interfere with the doctor-patient relationship causing the patient to conclude that the charges were exorbitant; and

WHEREAS, The Tennessee Medical Association in 1980 is on record opposing the use of the phrase "usual, customary and reasonable" and substituting "maximum payable under the policy." Now therefore be it

RESOLVED, That the Tennessee Medical Association again notify all insurance carriers including Blue Cross-Blue Shield that it strongly opposes the use of the phrase "usual, customary and reasonable" in payment denial notifications and recommends substitution of "maximum payable under the policy"; and be it further

RESOLVED, That the Tennessee Medical Association recommend that the House of Delegates of the American Medical Association pass a similar resolution opposing the use of the inflammatory phrase and notifying all insurance carriers nationally; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE C—*recommended adoption of Resolution No. 29-81.*

ACTION: **ADOPTED AS AMENDED**

RESOLUTION NO. 30-81

Swine Flu Program

BY: THOMAS G. DORRITY, M.D.

MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

RESOLVED, That the Tennessee Medical Association withdraw its endorsement of the Swine Flu Program; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE D—*recommended adoption of Resolution No. 30-81.*

ACTION: **ADOPTED**

RESOLUTION NO. 31-81

Tobacco Advertising

BY: H. TRENT VANDERGRIF, M.D.

BLOUNT COUNTY MEDICAL SOCIETY

WHEREAS, The harmful effects of tobacco on the human body are no longer in doubt; and

WHEREAS, There has been an alarming increase in full-page and double-page cigarette advertisements in newspapers in the past few months. Now therefore be it

RESOLVED, That the Tennessee Medical Association ask each newspaper in the state of Tennessee to voluntarily refrain from accepting tobacco advertising; and be it further

RESOLVED, That the Tennessee Medical Association congratulate and commend publicly all of those newspapers which refrain from accepting tobacco advertising; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE B—*recommended adoption of Resolution No. 31-81.*

ACTION: **ADOPTED**

RESOLUTION NO. 32-81

Promotion of Wellness Programs

BY: H. TRENT VANDERGRIF, M.D.

BLOUNT COUNTY MEDICAL SOCIETY

WHEREAS, Each person should take a greater role in protecting his or her own health; and

WHEREAS, There now exists a national educational effort called "wellness" which advocates self-responsibility in protecting and enhancing health through the proper use of nutrition, physical fitness, environmental control, and stress management; and

WHEREAS, The principles of wellness can reduce unnecessary health care costs; reduce illness, disability, and premature death; and increase the quality of life. Now therefore be it

RESOLVED, That the Tennessee Medical Association strongly favor wellness as a valuable and desirable addition to traditional health care; and be it further

RESOLVED, That all Tennessee physicians work with others in their communities to promote wellness principles, to develop programs to upgrade health education, to develop programs to detect health risks, to disseminate information on wellness-promoting lifestyle practices, and to re-emphasize the role of the doctor as a teacher; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE D—*recommended adoption of Resolution No. 32-81.*

ACTION: **ADOPTED**

RESOLUTION NO. 33-81

Radiation Safety Act

BY: ROBERT E. CLENDENIN, JR., M.D., CHAIRMAN
TMA BOARD OF TRUSTEES

WHEREAS, The Tennessee Medical Association promotes the delivery of quality medical services to the general public; and

WHEREAS, Questions have been publicly raised by physicians and members of the Tennessee General Assembly regarding the safety of the delivery of x-ray services in physicians' offices by noncertified personnel; and

WHEREAS, Legislation has been introduced in the first session of the 92nd Tennessee General Assembly under the guise of being a radiation safety act; and

WHEREAS, This legislation is in fact nothing more than a licensing act for radiological technologists; and

WHEREAS, Education is more appropriate than licensure of another allied health profession; and

WHEREAS, A legislative study committee has been charged to investigate the delivery of x-ray services in physicians' private offices and will be developing a report for the Tennessee General Assembly including recommendations regarding legislation pertaining to licensing of x-ray technologists; and

WHEREAS, There is a need to assure the public that x-ray services which are delivered in physicians' offices are safe and of the highest quality; and

WHEREAS, There is no evidence that licensing technologists will increase the safety of x-ray services. Now therefore be it

RESOLVED, That the Tennessee Medical Association in conjunction with the Tennessee Department of Public Health Division of Radiological Health and the Tennessee Radiological Society develop a program of continuing education for noncertified personnel involved in the delivery of x-ray services in physicians' offices; and be it further

RESOLVED, That the Tennessee Board of Medical Examiners be urged to develop regulations relative to physicians who employ individuals other than certified technologists for x-ray services; and be it further

RESOLVED, That these regulations specify that physicians be required to assure the attendance of said employees to this safety program; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE B—*recommended adoption of Resolution No. 33-81.*

ACTION: ADOPTED

RESOLUTION NO. 34-81

Dimethylsulfoxide (DMSO)

BY: CHARLES E. JORDAN, M.D.
PUTNAM COUNTY MEDICAL SOCIETY

WHEREAS, There have been several clinical studies that show that dimethylsulfoxide (DMSO) has a potential of being a very effective anti-inflammatory agent under medical supervision; and

WHEREAS, DMSO has had considerable publicity about its effects as an anti-inflammatory agent for use in arthritic situations; and

WHEREAS, Animal studies have shown the potential effect of DMSO on causing cataracts; and

WHEREAS, Industrial grade DMSO is available as a solvent or as a degreaser; and

WHEREAS, There are pharmacies in the state of Tennessee that are selling industrial grade dimethylsulfoxide with large advertising displays. Now therefore be it

RESOLVED, That the Tennessee Medical Association ask the Tennessee Pharmaceutical Association and the State Board of Pharmacy to inform the pharmacists in the state of Tennessee of the present illegal use of DMSO as an anti-inflammatory agent when applied topically and that the Tennessee Medical Association inform the Federal Drug Administration of the need to proceed with all deliberate speed in the evaluation of DMSO as an anti-inflammatory agent and release it for use under proper medical supervision as soon as possible if the FDA finds it to be a safe therapeutic agent; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE B—*recommended adoption of Resolution No. 34-81.*

ACTION: ADOPTED

RESOLUTION NO. 35-81

Medical Records

BY: ROBERT E. CLENDENIN, JR., M.D., CHAIRMAN
TMA BOARD OF TRUSTEES

WHEREAS, Medical records are and should remain the property of the individual physician; and

WHEREAS, Patients should have certain rights of access to information on their records; and

WHEREAS, The doctrine of confidentiality requires that a physician not divulge certain information to third parties without the consent of the patient. Now therefore be it

RESOLVED, That the term "medical record" be defined as that information in the possession of the physician relating to any diagnosis, treatment and prognosis of the patient of that physician, and includes (a) case histories; (b) clinical records; (c) prescription records; (d) treatment charts; (e) reports to third parties and notations of such reports entered on the medical record; (f) representative and interpretative summaries of x-rays and laboratory reports; and be it further

RESOLVED, That the Tennessee Medical Association policy regarding patient access to medical records is as follows:

A. Member physicians may make available to a patient, upon a written request, summaries or copies of the patient's medical record.

B. Patients should have access to a record of all medical reports concerning the patient made available to third parties (any health care provider, public or private insurance carrier, employer, attorney or governmental agency or body).

C. Physicians should comply with the patient's written request for copies of the medical record within a reasonable time, not to exceed 60 days.

D. At the physician's discretion, disclosure of any portion of the medical record to the patient may be made in the form of an accurate, representative summary of the factual information contained within the written account(s).

E. For the purpose of these guidelines, "medical record" does not include the personal office notes of physicians or personal communications between a referring and consulting physician relating to the patient. However, at the discretion of the physician, representative summaries of such notes and communications may be included in the disclosure.

F. If the physician disclosing the medical record to a patient believes, in good faith, that the release of any portion of the medical record would be injurious to the health or well-being of patient, such disclosure of any portion of the medical record may be denied.

G. The physician may establish charges for the costs incurred in providing the patient with copies of his medical record. Such charges may include the costs of reviewing, summarizing and/or reproducing the original medical record. The physician should not refuse to give medical reports or depositions where the patient is unable to pay his bill for medical services. The physician may refuse to honor requests for reports and/or depositions requested for litigation if payment for same is not made at the time of the service rendered or by agreement within a reasonable time after billing.

H. Any portion of a medical record relating to medical or surgical diagnosis or treatment of a minor emancipated by law, and performed without the consent or knowledge of the parent(s) or guardian, shall not be disclosed to the parent(s) or guardian without the written consent of the minor; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE C—*recommended referral of Resolution No. 35-81 to the TMA Judicial Council.*

ACTION: REFERRED TO THE TMA JUDICIAL COUNCIL (for consideration and reintroduction to the House of Delegates at the 1982 Annual Meeting)

RESOLUTION NO. 36-81

Hospital Delivery of Ambulatory Care Services

BY: W. ROBERT GRONEWALD, M.D.
HAMBLEN COUNTY MEDICAL SOCIETY

WHEREAS, The Tennessee Hospital Association is actively pursuing through its membership workshops, "diver-

sifying into ambulatory care (as) corporate and management . . . options for hospitals . . . (to) expand the hospital revenue base"; and

WHEREAS, Such expansion may impact upon physicians' professional and economic postures. Now therefore be it

RESOLVED, That the TMA Board of Trustees appoint a committee to investigate the potential impact of such hospital expansion into ambulatory services upon patient care and physicians and report with recommendations to the House of Delegates at its 1982 meeting; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE C—*recommended adoption of Resolution No. 36-81.*

ACTION: ADOPTED

RESOLUTION NO. 37-81

TMA Student Education Fund

BY: ROBERT H. HARALSON, III, M.D.
BLOUNT COUNTY MEDICAL SOCIETY

WHEREAS, The American Medical Association's Educational and Research Foundation (ERF) has suspended the making of loans to medical students; and

WHEREAS, The Tennessee Medical Association's Student Education Fund (TMA-SEF) continues to serve needy medical students by making loans, when available, at reasonable interest rates; and

WHEREAS, The Tennessee Medical Association Student Education Fund now has applications for loans in excess of its funds; and

WHEREAS, The Tennessee Medical Association Auxiliary contributes thousands of dollars annually to the American Medical Association's Educational and Research Foundation. Now therefore be it

RESOLVED, That TMA members be encouraged to individually and collectively petition the TMA Auxiliary and its membership to direct additional efforts to secure contributions to the TMA Student Education Fund; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1988.

REFERENCE COMMITTEE D—*recommended adoption of Resolution No. 37-81 as amended.*

ACTION: ADOPTED AS AMENDED

DISTINGUISHED SERVICE AWARDS

The Distinguished Service Award is presented annually by the Board of Trustees of the Tennessee Medical Association to physician members who have made eminent contributions to the public welfare or to the advancement of medical science. At the 146th Annual Meeting of TMA on April 8-11, the Chairman of the Board of Trustees announced that there were three recipients of this award in 1981.

James Kelley Avery, M.D., Union City, attended public schools in Crockett County. He did his pre-medical studies at Baylor University and Southern Methodist University in Texas and received his M.D. degree from the University of Tennessee. He has practiced family medicine in Union City since 1951. He was the first chairman of the Claims Review Committee of TMA's physician-owned State Volunteer Mutual Insurance Company and has been its president for three years. Dr. Avery was chairman of the TMA Board of Trustees in 1973 and served as TMA President in 1975.

He was the first president of the five-county Northwest Tennessee Academy of Medicine and is a diplomate of the American Board of Family Practice. He has been a member of the Board of Education of Union City for eight years and served four years as chairman of the Obion County Democratic Party. Dr. Avery has been instrumental in promoting Lake County Health Department programs which have substantially reduced infant mortality and upgraded medical availability and care in that county. Last year, he was ordained a deacon in the St. James Episcopal Church of Union City and has completed a four-year tutorial course in theological studies.

For these and many other accomplishments, the Board of Trustees was pleased to present this award to Dr. Avery.

Thomas G. Dorrity, M.D., Memphis, a native of South Carolina, has been a surgeon in Memphis since 1949. He has received numerous honors for his work in defense of freedom, including the Practice of Freedom Award of the Memphis Chamber of Commerce and the Civitan Americanism Award. He received his M.D. degree from the University of Tennessee Center for the Health Services in 1942 and did his internship and residency in surgery at Methodist

Hospital in Memphis. He served in the 99th Infantry Division of the U.S. Army in World War II.

In 1969-70, Dr. Dorrity was speaker of the house of delegates of the Association of American Physicians and Surgeons and served as its president in 1972.

Dr. Dorrity has worked tirelessly to promote the free-choice system of medical care in the United States and has been a consistently vocal opponent of socialized medicine. He has appeared before many committees and subcommittees of the Congress of the United States, speaking against intervention of governmental programs such as compulsory national health insurance, professional standards review organizations, governmental price controls, health systems agencies, and health maintenance organizations.

The Board of Trustees was proud to present this award to Dr. Dorrity.

Vernon Earl Wilson, M.D., Nashville, is vice president for Medical Affairs at Vanderbilt University, a position he assumed in 1974. He is a native of Iowa who received his M.D. degree from the University of Illinois where he did his internship in 1952-53.

He is a founding member of the American Board of Family Practice. He was recognized by Chancellor Alexander Heard of Vanderbilt University in September, 1980, at the dedication of Vanderbilt's new 514-bed medical center hospital as "the captain of the team for the last six years who made the present physical plant possible." As a member of the Nashville Academy of Medicine Membership Committee in 1980, he stressed the importance of encouraging medical student membership in the Academy, resulting in the development of an ongoing liaison between the Academy and Vanderbilt University School of Medicine.

Dr. Wilson was administrator of health services and mental health administration for the U.S. Department of Health, Education and Welfare from July, 1970, to December, 1972. He served as vice president for Academic Affairs at the University of Missouri in 1968-70 and was executive officer of the Missouri State Crippled Children's Service from 1960 to 1968.

Dr. Wilson certainly has won the admiration of this Association and is truly deserving of the Distinguished Service Award.

COMMUNITY SERVICE AWARDS

Each year, the Tennessee Medical Association is privileged to present its Community Service Award to citizens who have made significant contributions to their community and state in the very broad field of health care. This year, TMA recognized the contributions of three distinguished Tennesseans—a lady and two gentlemen.

Sister Thomas de Sales, a native of Maryland, is a lady whose life has been dedicated to two goals—working for God through the Sisters of Charity of Nazareth, Kentucky, a Catholic order of nuns; and providing thorough, compassionate medical care for her patients. Her success in achieving these goals has been admirable.

She entered the Sisters of Charity of Nazareth in 1938, becoming a registered nurse and nurse anesthetist. In 1959, she received her B.S. degree in Nursing from Catherine Spalding College in Louisville, Kentucky. After a series of supervisory positions in health care at hospitals in Kentucky and Arkansas, she came to Chattanooga in 1967. Since then, she has literally turned Memorial Hospital around in her position as administrator by adding a new, more convenient entrance, a new emergency room, 80 patient beds, a building for ancillary services, two physician office buildings, and more convenient parking for visitors and employees. Currently, she is planning another addition to the hospital to house enlarged surgical suites and intensive care units. Aided by her efforts, Memorial Hospital's comprehensive heart surgery program today equals similar programs in the southeast and rivals any in the nation.

The TMA Community Service Award was proudly given to Sister de Sales as a token of respect and appreciation from the state's physician community.

Judge Wilford Parks, Jr., a native of Lake County, was a member of the first vocational agriculture class at Tiptonville High School and continued his studies in agriculture at the University of Tennessee at Martin while assisting in his father's farming operation.

He married the former Juanita Mooring in 1940. They have three children. Being one of the most successful farmers in Lake County, he also has been keenly interested in the welfare of his county.

In 1946, he was elected County Trustee, serving four years in that position. In 1971, he was appointed County Judge to fill the unexpired term of the late Judge Richard Helton. In 1974, he was elected to an eight-year term as County Judge.

Through his efforts, funds were obtained and a new Lake County Health Department was built in 1976. He arranged for the building to be erected by the Lake County High School Trade and Industry

Class under his supervision. A primary health care center was built in the same way in 1977.

Judge Parks has helped obtain funds and has supervised the construction of a doctors' clinic for the city of Tiptonville. Under his supervision, the county remodeled buildings for senior citizens in both Tiptonville and Ridgely. The county now has information, transportation and referral programs through the Northwest Tennessee Economic Development Council and he supervises the program.

The efforts of this man have significantly contributed to improved health care in his community and the Board of Trustees was very proud to honor Judge Parks.

Mr. Gene Roberts, a native of Chattanooga, serves our state as commissioner of the Department of Safety.

He served as Chattanooga Fire and Police commissioner and vice mayor for eight years. Also, he served the Federal Bureau of Investigation as a special agent and is a former editorial writer for The Chattanooga Times. He and his wife, Cherrie, have two sons and a daughter and live in Brentwood, near Nashville. He is an active member of the International Association of Chiefs of Police and is chairman of the board of directors of the State Law Enforcement Training Academy.

He was appointed Commissioner of the Department of Safety in January, 1979, by Governor Lamar Alexander. In the early stages of his state responsibilities, he noted that, while Tennessee had become the first state in the nation in 1977 to pass a child passenger safety law, it was going virtually unnoticed by both law enforcement officials and parents across the state.

Under his direction in September, 1979, a program was launched to assure compliance and to make people aware of the child passenger safety law. Child restraint devices were placed in state troopers' cars with the aid of a federal highway safety grant. He urged Tennessee's judges to support the program and physicians spent time in training sessions with state troopers to discuss experiences of children injured in automobile accidents. A donor program was begun in which child restraint devices were solicited from civic clubs and parents who no longer had need of such devices.

Over a year after the program's inception, the effort continues. Statistics indicate that the Tennessee Highway Patrol has increased by almost 300% the number of citations it issues for violation of the law on child passenger restraint.

The TMA Board of Trustees is highly honored to bestow its Community Service Award on a richly deserving Commissioner Gene Roberts.

TENNESSEE'S OUTSTANDING PHYSICIAN OF THE YEAR

David P. McCallie, M.D.

The Tennessee Medical Association's prestigious Outstanding Physician of the Year award for 1981 was presented to David P. McCallie, M.D., of Chattanooga. He was nominated by his colleagues from the Chattanooga-Hamilton County Medical Society. As the 24th recipient of the award presented by the House of Delegates, he was cited for his civic as well as professional contributions in Chattanooga.

As president of the Chattanooga-Hamilton County Medical Society in 1969, he initiated efforts to reorganize Baroness Erlanger Hospital and T. C. Thompson Children's Hospital. Throughout the following years he worked diligently to form a Hamilton County Hospital Authority that was officially inaugurated in 1976. He later became chairman of the board of that Authority and in 1979, recognizing those efforts, joined his wife in accepting the Distinguished Service Award from the Chattanooga Kiwanis Club.

Dr. McCallie, 59, has been in the practice of internal medicine in Chattanooga since 1952. He received his M.D. degree from the University of Pennsylvania where he also completed his internship

and residency in internal medicine from 1946-51. He received a fellowship in cardiology at the University of Pennsylvania in 1951-52.

He is a past-president of the Tennessee Heart Association and the Chattanooga Area Heart Association. In 1976 he was honored with the Distinguished Service Award from the Tennessee Hospital Association. He is a former chief of staff of Memorial, Baroness Erlanger and T. C. Thompson Children's Hospitals in Chattanooga, and he has served as clinical associate professor at the University of Tennessee Clinical Education Center. He is credited with fostering the needed working relationships within the medical institutions in Chattanooga that played a role in the development of Erlanger Medical Center becoming the area's tertiary care center.

The Outstanding Physician of the Year award is presented annually to an individual selected for service to the community, a civic project, or scientific and medical achievement. Dr. McCallie is rightly deserving of this honor as so recognized by the 169 members of the Tennessee Medical Association's House of Delegates.

COMMENDATION RESOLUTION

Rudolph H. Kampmeier, M.D.

BY: TMA BOARD OF TRUSTEES

WHEREAS, The Tennessee Medical Association celebrated its 150th birthday in 1980 as the oldest professional association in Tennessee; and

WHEREAS, As a part of the effort to commemorate the milestone, the Board of Trustees prevailed upon Rudolph H. Kampmeier, M.D., to write the History of the Tennessee Medical Association for the fifty year period 1930-1980; and

WHEREAS, Dr. Kampmeier spent seven years researching, writing, and editing the 544-page volume; and

WHEREAS, Publication of the History has been completed and is now available to all members. Now therefore be it

RESOLVED, That the House of Delegates commend and extend its sincere appreciation to Dr. Kampmeier for the many hours of work expended on behalf of the Tennessee Medical Association in writing the History; and be it further

RESOLVED, That a copy of this resolution, appropriately engrossed, be presented to Dr. Kampmeier as an expression of the House of Delegates' gratitude for his untiring efforts and contributions to medicine and for the excellent manner in which the history has been preserved.

REPORTS OF OFFICERS

Report of the President

GEORGE A. ZIRKLE, JR., M.D.

During the 151st year of the Tennessee Medical Association your President, President-Elect, and Board of Trustees have visited 22 component medical societies in an attempt to keep the membership informed of the activities of this organization. Numerous meetings have also been held with the Tennessee Nurse's Association, the Tennessee Hospital Association, and the Tennessee Pharmaceutical Association and other allied health professionals.

I shall not list all of the activities this past year since these activities will be included in the Board of Trustees report and other committee reports which will follow.

During this year of active participation of members of the Tennessee Medical Association in the medical care of the citizens of the state of Tennessee, we are ready and willing to protect the best interest of our patients and our profession.

The Tennessee Medical Association has an outstanding staff of dedicated professionals who are perceptive, incisive, knowledgeable and responsive.

As a result of our excellent staff and a group of dedicated physicians who serve on the Board of Trustees and members

of the standing and special committees, the Tennessee Medical Association has faced our most serious problems in a responsive and understanding manner.

Each challenge is merely an opportunity to explain the correctness of our policies in safeguarding the public health and assuring the accessibility of *quality* health care.

Medicaid and the lack of proper funding for the physicians who provide care for these patients continues to be a major problem. Our society has encouraged improved eligibility requirements and monitoring. We support a co-pay amendment to the Medicaid law providing a small co-payment to help prevent abuse and overuse of the system.

The highlight of this past year was reached in December, 1980 when our Association's membership in the American Medical Association increased to the level that we qualified for a fifth delegate and alternate delegate to the American Medical Association. I would encourage every member of each component medical society to support both the TMA and the AMA with your presence, your interest, and dues. Given the challenges that organized medicine faces, we need a unified effort by all physicians.

We will continue to be an example for all medical associations—large or small—throughout our country.

Our membership has selected an excellent President-Elect and Board of Trustees who are committed to devoting the necessary time, energy and expertise to accomplish the goals and objectives established by our Board and its various committees. Together we will continue to thwart misguided inroads against the private practice of medicine which has made possible the highest caliber of health care delivery in the history of the world. With your continued dedication, support, and enthusiasm, we will continue to protect the best interest of our patients and our profession.

REFERENCE COMMITTEE C—*received the report of the President, complimented Dr. Zirkle for his organization and performance of duties during the year, and recommended that the report be filed.*

Report of the Board of Trustees

ROBERT E. CLENDENIN, JR., M.D., *Chairman*

The duties and responsibilities of the Board of Trustees are to carry out the mandates and policies as determined by the House of Delegates. Full authority rests with the Board between sessions of this body to manage and oversee the affairs of the Association in regard to finances, property management, recordkeeping, and all demands of an organization as required by state and federal law.

During the past 12 months, the Board conducted regular quarterly meetings during which 156 separate items of business were considered and acted upon. Highlights of these meetings were reported in the *Journal of the Tennessee Med-*

ical Association in order for the members to be aware of the Board's actions.

Reports of other officers detail many of the activities with which the Board has been a part during the year. Officers and members of the Board attended many county society meetings to maintain close liaison and keep the membership informed of current problems and activities of the Association. National meetings and conferences were attended and numerous meetings with allied organizations and various departments of state government were conducted. TMA members have been well represented by their elected officers and trustees.

The Board is encouraged by the improved communications developed during the past 12 months with various medical specialty organizations. Staff support on an at-cost basis is now being provided for the Tennessee Society of Internal Medicine, the Tennessee District Branch of the American Psychiatric Association, the Tennessee Chapter of the American Academy of Pediatrics/Tennessee Pediatric Society, and the Tennessee Academy of Ophthalmology. Central recordkeeping and continuity of affairs are just two important benefits of this service. Close liaison with TMA staff is made possible by such arrangements, and other specialty organizations are encouraged to join in this endeavor. Everyone benefits from this close liaison and organizational improvement.

A major capital outlay was made early this year with the purchase of a mini-computer. A two-year study of equipment utilized by other state medical associations as well as data being obtained and maintained on individual members was conducted by staff prior to a final decision being made. We anticipate improvements in recordkeeping, bookkeeping, word processing, and record maintenance as a result of this outlay. The ability of county societies to also utilize the data storage and retrieval also exists with terminals available in any location within the state. It is no small undertaking, but one that is needed in order to keep pace with the expanding day-to-day business being conducted electronically.

The following are abstracted highlights of some of the more important items of business considered and acted upon at each Board meeting during the past 12 months.

Second Quarter Board Meeting—April 12, 1980

The Board:

- Elected a chairman, secretary-treasurer, and assistant secretary-treasurer.
- Elected an Executive Committee and six committees of the Board.
- Named division coordinators for five TMA divisions.
- Accepted recommendations regarding licensing of physicians' offices in which a substantial number of abortions are performed.
- Received a report from the Judicial Council regarding recommendations and guidelines to be used by county medical societies in screening applicants for membership.
- Approved a loan of \$25,000 to the TMA Student Education Fund.
- Appointed Board members to serve as liaison with various medical specialty societies.

Third Quarter Board Meeting — July 13, 1980

The Board:

- Reaffirmed approval of the Medicaid Data Program project.
- Received reports from the Impaired Physician Committee, Maternal Mortality Subcommittee, Committee on Legislation, and Committee on Governmental Medical Services.
- Approved the establishment of weekly newspaper articles on health topics for distribution to Tennessee weekly newspapers as recommended by the Committee on Rural Health.
- Received a report from the Committee on Continuing Medical Education.
- Postponed final action on a recommendation that TMA's participation on the TMA/TNA Joint Practice Committee be terminated.
- Appointed an ad hoc committee to study the question of admitting osteopaths for membership in TMA.
- Received a report regarding proposed cuts in the state Medicaid budget.
- Discussed topics and speakers for the annual Medicine and Religion Breakfast during the Annual Meeting.
- Denied a request for financial support from the Southern Association of Cytotechnologists.
- Received a report regarding purchase and use of a computer-word processor.
- Postponed final recommendation regarding the use of the AMA Uniform Health Insurance Claim form until the October Board meeting.
- Approved a recommendation from the Travel Committee that TMA sponsor an eight-day tour to the island of Madeira in February, 1981.
- Approved recommendations from the Finance Committee regarding the amounts of reserve funds permitted to be invested in any one qualified bank or savings institution and approved changes in executive staff employment contracts regarding retirement income in order to comply with IRS rules and regulations.
- Received for information a report from IMPACT.
- Received for information a report from State Volunteer Mutual Insurance Company.
- Received for information a report from the Mid-South Foundation for Medical Care.
- Approved a recommendation that newly licensed physicians be given a course on loss prevention by various medical malpractice insurance companies.
- Approved the second quarter financial statement.

Fourth Quarter Board Meeting — October 12, 1980

The Board:

- Approved a report with recommendations from the Committee on Emergency Medical Services.
- Received for information a report from the Impaired Physician Committee and the Committee on Governmental Medical Services.
- Approved six recommendations from the Committee on Legislation.

- Received for information reports from the Committee on Rural Health, Committee on Group Insurance, and Committee on Continuing Medical Education.
- Voted to withdraw TMA representation on the TMA/TNA Joint Practice Committee.
- Directed that staff survey insurance companies writing health insurance in Tennessee as to the use of the words "usual, customary, and reasonable" in their contracts.
- Endorsed guidelines recommended by the Judicial Council regarding physician advertising and directed that they be forwarded to the Board of Medical Examiners for consideration.
- Recommended that local societies consider sponsoring a seminar on negotiations with the AMA.
- Approved purchase of liability insurance for officers and directors.
- Nominated Dr. Thomas K. Ballard for appointment to the AMA Council on Long Range Planning.
- Directed that staff investigate and recommend a system whereby liaison can be maintained with government organizations and insurance carriers.
- Appointed an ad hoc committee to study and make recommendations as to a method of electing a fifth AMA delegate and alternate.
- Received a resolution from the Tennessee Society of Anesthesiologists regarding inequity of reimbursement in various state health programs and referred the matter to the Governmental Medical Services Committee.
- Received a report regarding the status of cuts in the Medicaid program.
- Approved billing for TMA Auxiliary dues for those societies that agree to have Auxiliary dues included in their bill form.
- Received reports from IMPACT and State Volunteer Mutual Insurance Company.
- Directed that Board members study various resolutions adopted by the House prior to 1974 to determine which, if any, should be reintroduced.
- Directed that responses to inquiries regarding chiropractic requests for hospital privileges and the use of outpatient hospital facilities be made a local matter for individual hospital determination since no TMA or AMA position exists.
- Received a report from staff regarding Resolution No. 14-80.
- Directed that TMA membership be informed of some pharmacists seeking to obtain blanket approval for generic substitution without regard to the Medicaid formulary.
- Approved the purchase of computer and word processing equipment.
- Approved the 1981 budget.
- Approved the fourth quarter financial statement.
- Reappointed the existing IMPACT Board of Directors for a one-year term to begin Jan. 1, 1981.

First Quarter Board Meeting — January 10-11, 1981

The Board:

- Named physicians to serve on all TMA standing and special committees.
- Received a report from the ad hoc committee to study the

method of electing the fifth AMA delegate and alternate and voted to accept a recommendation from Dr. Woodcock that a resolution from the Board be presented to the House in April.

- Voted to present to the House a resolution to permit membership in TMA by osteopaths.
- Directed that Resolutions Nos. 15-73, 10-74, and 8-73 be reintroduced in the House of Delegates.
- Referred Resolution No. 4-69 to the Judicial Council for their determination as to whether it should be revised, rewritten, or deleted.
- Received for information a report from State Volunteer Mutual Insurance Company.
- Approved the Hyatt Regency Hotel as the headquarters site for the 1982 Annual Meeting in Memphis.
- Approved the third week in April for the 1986 Annual Meeting to be held at the Opryland Hotel in Nashville.
- Received for information reports from the Committee on Mental Health and Impaired Physician Committee.
- Approved a mailing to the TMA membership from the EMS Committee regarding regional EMS seminars.
- Voted to award Community Service Awards to Mr. Gene Roberts, Sister Thomas De Sales, and Judge Wilford Parks, Jr.
- Received reports from the Committee on Medicine and Religion and the Committee on Continuing Medical Education.
- Appointed the Nominating Committee.
- Received reports from Mid-South Foundation for Medical Care and IMPACT.
- Directed that legal counsel investigate a request that TMA reimburse physicians for counselor visits under the Medicaid Data project.
- Appointed Mr. Charles L. Cornelius, Jr. as legal counsel for 1981.
- Appointed Mr. Ezra Jones as TMA accountant for 1981.
- Voted to award Distinguished Service Awards to Drs. J. Kelley Avery, Vernon E. Wilson, and Thomas G. Dorrity.
- Received for information proposed legislation from the Department of Mental Health and Mental Retardation.
- Approved the 1980 financial statement.
- Approved the 1981 budget.
- Approved the introduction of a resolution regarding patient access to medical records.
- Received a report regarding the activities of the SHPDA Health Data Advisory Committee.
- Approved a recommendation from the Travel Committee that TMA sponsor a 12-day Western Mediterranean Air/Sea Cruise in October, 1981.
- Received a report from the Committee on Legislation.
- Received a report regarding the Frank M. Norfleet Forum for the Advancement of Health held in Memphis.

The Board of Trustees has expedited all House directives referred from the 1980 Annual Meeting. Details of all discussions and actions of the trustees are contained in the official minutes of each session, which are maintained at TMA headquarters and are available for review by any TMA member. Much time and effort have been expended by members of the Board of Trustees during the past year. It has been a distinct privilege for me to have served as chairman and I want to personally thank the members of the Board for their untiring efforts to represent the best interests of physicians and the patients they serve.

REFERENCE COMMITTEE C—*received the report of the Board of Trustees, commended the chairman and members of the Board for their time and effort during the past year in the performances of their duties, and recommended that the report be filed.*

Report of the Judicial Council

NAT E. HYDER, JR., M.D., *Chairman*

The Constitution and By-Laws of the TMA require the component medical societies to make annual reports to the Judicial Council. These annual reports have been received from the 48 component societies and are in order. The Council wishes to express its appreciation for the cooperation and consideration given by the component societies in resolving ethical questions that have arisen during this past year.

The Judicial Council met on three occasions since this House last adjourned. The first meeting of the Council was an organizational session immediately following the House of Delegates last year. At that time Dr. Nat E. Hyder, Jr., was elected Chairman and Dr. William C. Patton was elected Secretary. It was with great regret that the Council learned of the passing of Dr. Patton in March, and his wisdom and forthright opinions will be greatly missed by this Council.

The second meeting of the Council was held in October, 1980. At that time the Council agreed to drop an investigation of a member of the Association who had a history of overcharging as viewed by the TMA's Peer Review Committee. This investigation was dropped in light of the Federal Trade Commission's ruling on association involvement in fee considerations. The Council also adopted a proposal to be sent to the Board of Medical Examiners that would establish rules and regulations for advertising. These rules and regulations were subsequently endorsed by the TMA Board of Trustees and are now under consideration by the State Board of Medical Examiners. The Council further considered the new AMA Principles of Medical Ethics. A question had arisen whether or not the TMA should have to officially adopt the new Principles. The Council was of the opinion that the Constitution and By-Laws of the TMA implied that the Principles of Medical Ethics of the AMA were to be followed and that there need not be an official endorsement by the House of Delegates.

The Council met again in February, 1981 at which time it primarily discussed resolutions referred to it by the Board of Trustees for determination of reaffirmation of TMA policy. Resolutions Nos. 12-81, 13-81, 14-81 and 15-81 have been introduced into this House of Delegates by the Judicial Council for adoption.

I wish to thank the members of the Judicial Council for their cooperation and assistance this past year.

REFERENCE COMMITTEE C—*reviewed the activities of the Judicial Council, extended its appreciation to members of the Council, and recommended that the report be filed.*

Report of the Secretary-Treasurer

JAMES C. BRADSHAW, JR., M.D.

The annual audit for the fiscal and calendar year ending Dec. 31, 1980 has been completed and is available for review. The customary examination of Association records was made by Mr. Ezra Jones, certified public accountant, whose report contains a summary of accounting policies and pertinent notes to financial statements along with the financial statements and supporting schedules. The Association uses the fund accounting method by specific purposes on a modified cash basis. The net value of property has been reduced by recording depreciation on a straight-line basis and charged as an expenditure. No provision has been made for income tax on unrelated income that might be assessed by the Internal Revenue Service, nor has any provision been made for possible losses on notes receivable.

Condensed financial reports are appended hereto in order to show the assets, liabilities, revenues, expenditures, and fund balances of the Association. Continuing high interest rates, combined with an increase of 93 dues-paying members, produced total revenue greater than projected. You will note that the operating fund balance increased by about \$170,000 during the year. This maintains the fund, based upon 1981 projected expenditures, slightly above the traditionally conservative level of 18 months.

I assure you that our Association remains financially sound and that its fiscal affairs are being managed responsibly.

TENNESSEE MEDICAL ASSOCIATION

CONDENSED BALANCE SHEET

	Year Ended December 31	
	1980	1979
ASSETS		
1. Bank Accounts (Checking and Savings)	\$ 131,166.74	\$ 141,017.53
2. Investments	1,434,226.58	1,244,676.77
3. Interfund Notes Receivable (Student Education Fund)	89,200.00	54,200.00
4. Fixed Assets (Land, Building, Equipment — Less Depreciation)	247,251.86	252,022.20
TOTAL	\$1,901,845.18	\$1,691,916.50
LIABILITIES AND FUND BALANCE		
1. Accounts Payable	\$ 7,832.42	\$ 2,995.93
2. Accrued Payroll Taxes	480.56	225.25
3. Deferred Credits (Advance Dues)	361,392.50	322,942.50
4. O & R Fund	1,284,887.84	1,113,730.62
5. Property Fund	247,251.86	252,022.20
TOTAL	\$1,901,845.18	\$1,691,916.50

CONDENSED OPERATING STATEMENT

	Year Ended December 31	
	1980	1979
INCOME		
Exhibits and Annual Meeting	\$ 36,700.00	\$ 18,375.00
TMA Dues	528,398.50	515,761.00
Investment Income	176,925.45	114,381.38
Miscellaneous Income	8,287.68	4,469.65
TOTAL	\$750,311.63	\$652,987.03
EXPENDITURES		
Administration	\$339,753.44	\$308,450.48
AMA Delegates	10,708.39	17,040.18
Annual Meeting — TMA	34,296.04	26,432.12
Attorney	8,100.00	8,917.92
Board of Trustees — Committees-Council	31,760.51	26,958.81
Office Equipment and Maintenance	15,639.87	—
Headquarters Building	16,516.64	21,858.62
Other Organizations	8,530.00	7,490.00
Legislative Expense	20,496.24	13,274.15
Taxes	17,395.91	15,239.30
Travel	30,736.15	31,802.32
Other Expenses	11,422.98	5,599.71
SUBTOTAL	\$545,356.17	\$483,063.61
Excess Journal Costs	\$ 33,798.24	\$ 16,656.67
Excess of Revenue Over Expenditures	171,157.22	153,266.75
TOTAL	\$750,311.63	\$652,987.03

JOURNAL INCOME AND EXPENSE

Year Ended December 31, 1980

	Total	Readership	Advertising
INCOME			
Allocation of Dues	\$ 40,239.00	\$40,239.00	\$ —
Advertising	30,756.23	—	30,756.23
Subscriptions	1,798.00	1,798.00	—
	\$ 72,793.23	\$42,037.00	\$30,756.23
EXPENSES			
Printing and Distribution	\$ 65,844.43	\$47,784.10	\$18,060.33
Editor and Board	3,080.00	3,080.00	—
Clerical Assistance	600.00	600.00	—
Clipping Service	989.28	989.28	—
Salaries	15,325.36	7,662.68	7,662.68
Employee Insurance	513.16	256.58	256.58
Taxes	939.56	469.78	469.78
Overhead	19,299.68	12,866.44	6,433.24
	\$106,591.47	\$73,708.86	\$32,882.61
	(\$ 33,798.24)	(\$31,671.86)	(\$ 2,126.38)

REFERENCE COMMITTEE C—*reviewed the report of the secretary-treasurer and the statement of the certified public accountant, commended Dr. Bradshaw for the improved financial situation of the Association, and recommended that the report be filed.*

Report of the Executive Director

MR. L. HADLEY WILLIAMS

Last year, a milestone in the history of the Tennessee Medical Association was reached when the 150th anniversary of the Association was celebrated. Another milestone will be achieved in 1981 when membership surpasses 5,000 for the first time in history. In addition, membership in the American Medical Association increased for the fourth straight year and the current total of 4,089 will enable TMA to elect and send a fifth delegate to represent Tennessee physicians within the AMA House of Delegates.

Reaching all-time highs in membership will not result in decreased efforts on the part of TMA to continually improve totals. An active ongoing program of recruitment exists and efforts to encourage county societies to actively solicit members from the student classes as well as residents and interns continues to be made. Benefits of membership in the federation of organized medicine must be made known to the young physician for it is from his ranks that medicine's leadership of tomorrow will emerge. County societies are being urged to review membership categories and requirements in order to eliminate any barriers to membership that may exist.

TMA MEMBERSHIP REPORT As of December 31, 1980

	1980	1979	1978	1977
Dues Paying Active Members	4,419	4,306	4,217	4,004
Dues Paying Resident Members	65	80	68	45
Dues Exempt Members:	427	387	354	317
Veteran Status	308			
Military	6			
Disabled & Retired	113			
TOTAL	4,911	4,773	4,571	4,336
Deaths	36	32	32	56

AMA Members from Tennessee Medical Association:

Active Dues Paying	3,408
Residents	48
Dues Exempt	425
Direct Members	208

TOTAL AMA MEMBERS 4,089

(79% of TMA members are also AMA members)

With the new responsibility of representation for more and more members as the annual growth continues, TMA must be responsive to the needs of the membership and make necessary staff and equipment changes in order to effectively serve the membership. One giant step towards improved productivity within the headquarters staff will result with the installation and operation of an in-house computer. Constant evaluation of staff responsibilities with necessary shifting of duties within the existing staff has offset the necessity of adding personnel. Staff must keep abreast of current issues and frequent changes in such government programs as Medicaid, Medicare, HSAs, HMOs, IPAs, and many others. Staff has taken part in meetings at the local, state, and national levels on all of the above programs. Still, new issues, programs, and activities are added annually. As a result, the TMA staff remains flexible to cope with these many diversified challenges. Although each staff member has routine assignments, newer responsibilities must be shifted as the need indicates. As new or changing major issues are encountered, this shifting of duties is done to best meet the needs of the moment as well as the best long-term needs of the Association.

With continued membership growth, a high rate of return from invested reserves plus improved productivity of the staff, no dues increase is anticipated for the immediate future. TMA dues are currently 49th among the 50 state medical associations with the last dues increase having been assessed six years ago. Holding the line with inflation is the number one problem for all individuals as well as organizations such as TMA and it is not an easy task. We have been able to maintain the status quo, however, and we will continue to devote our efforts towards maintaining the balance we are now experiencing.

A breakdown of last year's budget and the areas in which expenditures were made is as follows: administration 35%, communications 13%, legislation 12%, field services 9%, taxes and insurance 8%, officers/delegates/committees 7%, miscellaneous 6%, building and equipment 5%, annual meeting 5%.

It is not appropriate for me to attempt to delineate all of the staff's activities for the past year. The following are some of the areas in which staff represented and served physicians in conducting the business of TMA on a day-to-day basis:

- Membership administration and recruitment
- Liaison with county medical societies
- AMA delegation staffing at two annual conventions
- Cooperation with medical specialty societies
- Public service programs
- Publication of the *Journal*, TMA Newsletter, and other publications
- Liaison with allied professional associations
- Development of TMA legislative program
- Liaison with members of the Tennessee General Assembly
- Dues collection and records maintenance
- Coordination, planning, staffing of the Annual Meeting, House of Delegates, both regular and called meetings, plus other conferences, seminars, and meetings
- Liaison with governmental agencies
- Staffing for the Board of Trustees, officers, and all committees
- Maintaining headquarters building and property
- Budget development and investment of funds

This outline is but a small sampling of the administrative procedures and activities in which the staff is engaged. The responsibility for the effective and efficient management of the headquarters staff lies with the Executive Director. Implementing the policies and programs approved by the House of Delegates, Board of Trustees, Judicial Council, and committees is the staff's function.

The Board's decision to provide administrative services to any medical specialty society desiring them, was, in my opinion, a big step forward and is paying dividends to both TMA and those societies taking advantage of the services. The Tennessee Society of Internal Medicine, the Tennessee Academy of Ophthalmology, the Tennessee District Branch of the American Psychiatric Association, and the Tennessee Chapter of the American Academy of Pediatrics-Tennessee Pediatric Society are currently utilizing the services provided by Ms. Susan Mahoney as their executive secretary. A knowledgeable and capable staff person to maintain society records, assist officers on a day-to-day basis, and provide a multitude of detailed services is being provided by Ms. Mahoney. I invite other specialty organizations to investigate the advantages of a central office. We stand ready to assist any and all who are interested.

I would like to express my appreciation to all of the officers and Board members for the many hours they have contributed on the part of the profession and for the leadership they have provided during the past year. Dr. George Zirkle, your President, has done a yeoman's job since last April and deserves each member's thanks for providing the strong leadership that is necessary for your organization. As his responsibility passes on to Dr. Allen S. Edmonson during this meeting, it will rest with a person who has for many years demonstrated the ability and leadership capacities expected of a president. I look forward to the coming year and my work with Dr. Edmonson.

My appreciation and gratitude is also extended to a loyal and dedicated staff. I am confident that their talent, dedication, and long hours of hard work are unsurpassed. On behalf of your staff, I would like to express our gratitude for the privilege of working for Tennessee physicians.

REFERENCE COMMITTEE C—reviewed the report of the executive director and commended Mr. Williams for the concise but thorough report and also for his excellent organizational talent in conducting the business of the Association. The Committee extended its appreciation to all members of the TMA staff for their services during the past year, and recommended that the report be filed.

Committee Reports

The following standing and special committees made annual reports to the House of Delegates:

- Committee on Scientific Affairs
- Committee on Legislation
- Committee on Governmental Medical Services
- Committee on Tennessee Medical Association Group Insurance
- Committee on Constitution and By-Laws
- Committee on Hospitals
- Committee on Peer Review
- Committee on Communications and Public Service
- Interprofessional Liaison Committee
- Committee on Continuing Medical Education
- Mediation Committee
- Committee on Rural Health
- Committee on Emergency Medical Services
- Advisory Committee to TMA Auxiliary
- Committee on Mental Health
- Committee on Medicine and Religion
- Tennessee Medical Association/Tennessee Nurses Association Joint Practice Committee
- Committee on Maternal and Child Care
- Committee on Long-Term Health Care
- Impaired Physician Committee
- Committee on Health Planning
- Primary Health Care Clinics Committee

Help for Impaired Physicians

Through its Committee on Impaired Physicians, TMA helps doctors who are suffering from alcoholism, other drug addiction, psychiatric disorders or senility. The thrust of the program is rehabilitative, not punitive. The Committee is composed of physicians who have special expertise in these areas, some from personal experience. Effective treatment for these illnesses is achieved most easily when the disease is detected early and family, friends, and associates are urged to avoid misguided sympathy which enables the condition to deteriorate.

HELP US TO HELP

Call the TMA Impaired Physician Program (615) 327-2711; outside Nashville call collect. Phone service available around the clock.

1981 TMA Annual Meeting — House of Delegates Composition

First Session: April 8 — Second Session: April 11

EX-OFFICIO MEMBERS

OFFICERS

		First Session	Second Session
President	George A. Zirkle, Jr.	Present	Present
President-Elect	Allen S. Edmonson	Present	Present
Vice President	Jack E. Butterworth	Present	Present
Vice President	B. J. Smith	Present	Present
Vice President	James H. Ragsdale	Present	Present
Speaker	Charles E. Allen	Present	Present
Vice Speaker	Malcolm R. Lewis	Present	Present

BOARD OF TRUSTEES

James C. Bradshaw	Present	Present
Robert E. Clendenin	Present	Present
James T. Galyon	Present	Present
C. Eugene Jabbour	Present	Present
Gilbert A. Rannick	Present	Present
James R. Royal	Present	Present
John L. Sawyers	Present	Present
George H. Wood	Present	Present
Clarence C. Woodcock, Jr.	Present	Present

COUNCILORS

First District	Nat E. Hyder, Jr.	Present	Present
Second District	John R. Nelson	Present	Present
Fourth District	Thurman L. Pedigo	Present	Present
Fifth District	William M. Young	Present	Present
Sixth District	Charles M. Hamilton	Present	Present
Seventh District	Kenneth J. Phelps, Sr.	Present	Present
Eighth District	Charles W. White	Present	Present
Ninth District	Hobart H. Beale	Present	Present
Tenth District	Daniel J. Scott, Jr.	Present	Present

PAST PRESIDENTS

J. Kelley Avery	Present	Present
John B. Dorian	Present	Present
James W. Hays	Present	Present

AMA DELEGATES

A. Roy Tyrer, Jr.	Present	Present
Morse Kochtitzky	Present	Present
Thomas K. Ballard	Present	Present
David H. Turner	Present	Present

AMA COUNCIL MEMBER

John H. Burkhart	Present	Present
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COMMISSIONER OF PUBLIC HEALTH

Eugene W. Fowinkle	Present	Present
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DELEGATES

EAST TENNESSEE GRAND DIVISION

County Society			
BLOUNT	Robert H. Haralson, III	Present	Present
.....	H. Trent Vandergriff	Present	Present
.....	Raymond A. Finney (Alt.)	Present	Present
BRADLEY	Hays Mitchell	Present	Present
.....	E. Harris Pierce	Present	Present
CAMPBELL	James W. Giles	Present	Present
CHATTANOOGA- HAMILTON	Billy J. Allen	Present	Present
.....	I. Lee Arnold	Present	Present
.....	Paul E. Hawkins	Present	Present
.....	David P. McCallie	Present	Present
.....	Robert W. Myers	Present	Present
.....	Pete S. Soteris	Present	Present
COCKE	Joseph D. Robertson	Present	Present
CUMBERLAND	Hugh Don Cripps	Present	Present
DeKALB	Dee L. Metcalf	Present	Present
GREENE	William J. Smead	Present	Present
HAMBLEN	David L. Greene	Present	Present
.....	W. Robert Gronewald	Present	Present
HAWKINS	James B. Bell	Present	Present
KNOXVILLE ACADEMY	Joe W. Black	Present	Present
.....	Leon J. Bogartz	Present	Present
.....	Martha J. Bushore	Present	Present
.....	Lloyd C. Davis	Present	Present
.....	Richard J. Erickson	Present	Present
.....	Richard G. Gillespie	Present	Present
.....	Joseph W. Harb	Present	Present
.....	Richard L. Hobart, Jr.	Present	Present
.....	William O. Miller	Present	Present
.....	William A. Nelson	Present	Present
.....	James C. Prose	Present	Present
McMINN	Larry J. Hargis	Present	Present
MONROE	James L. Allen	Present	Present
ROANE-ANDERSON	A. Julian Ahler	Present	Present
.....	E. C. Cunningham	Present	Present
.....	Charles B. Gurney	Present	Present
SCOTT	H. M. Leeds	Present	Present
SEVIER	Vincent B. Tolley	Present	Present

County Society

SULLIVAN-JOHNSON	Claude H. Crockett, Jr.	Present	Present
.....	Billy N. Golden	Present	Present
.....	Jerry L. Miller	Present	Present
.....	Joseph F. Smiddy	Present	Present
.....	Hal S. Stubbs	Present	Present
WASHINGTON- CARTER-UNICOI	Boyce M. Berry	Present	Present
.....	Duane C. Budd	Present	Present
.....	Burgin E. Dossett	Present	Present
.....	Clarence E. Goulding	Present	Present

MIDDLE TENNESSEE GRAND DIVISION

BEDFORD	John S. Derryberry	Present	Present
BENTON- HUMPHREYS	Subhi D. Ali	Present	Present
BUFFALO	Parker D. Elrod	Present	Present
RIVER VALLEY	Charles H. Webb	Present	Present
COFFEE	Daniel B. Drinnen	Present	Present
DICKSON	R. Douglas Smith	Present	Present
FENTRESS	Robert K. Barton	Present	Present
FRANKLIN	Budford P. Davis	Present	Present
GILES	G. D. Kienzie	Present	Present
JACKSON	Virgil H. Crowder	Present	Present
LAWRENCE	David R. McCauley	Present	Present
LINCOLN	Kenneth J. Phelps, Jr.	Present	Present
MACON	Thomas R. Duncan	Present	Present
MARSHALL	Stephen P. Simmons	Present	Present
MAURY	Don J. Jackson	Present	Present
MONTGOMERY	William C. Alford	Present	Present
NASHVILLE	Luther A. Beazley, Jr.	Present	Present
ACADEMY	Edmund W. Benz	Present	Present
.....	David G. Bowers	Present	Present
.....	H. Victor Braren	Present	Present
.....	John L. Farringer	Present	Present
.....	Charles M. Gill	Present	Present
.....	George W. Holcomb	Present	Present
.....	Robert W. Ikard	Present	Present
.....	Kent Kyger	Present	Present
.....	John W. Lamb	Present	Present
.....	Thomas W. Orcutt	Present	Present
.....	Ronald E. Overfield	Present	Present
.....	Jefferson C. Pennington	Present	Present
.....	C. David Scheibert	Present	Present
.....	Sarah H. Sell	Present	Present
.....	John B. Thomison	Present	Present
.....	Charles B. Thorne	Present	Present
.....	C. Richard Treadway	Present	Present
.....	John K. Wright	Present	Present
OVERTON	Charles E. Jordan	Present	Present
PUTNAM	James T. Deberry (Alt.)	Present	Present
ROBERTSON	James B. Turner	Present	Present
RUTHERFORD	Harold T. Akin	Present	Present
.....	Olin O. Williams	Present	Present
SMITH	Hugh E. Green	Present	Present
SUMNER	Clarence R. Sanders	Present	Present
.....	Lloyd T. Brown (Alt.)	Present	Present
WARREN	Robert F. Baker	Present	Present
WHITE	Starling C. Evins	Present	Present
WILLIAMSON	Joseph L. Willoughby (Alt.)	Present	Present
WILSON	James R. Gray	Present	Present

WEST TENNESSEE GRAND DIVISION

CONSOLIDATED	James T. Craig	Present	Present
.....	Oscar M. McCallum	Present	Present
.....	Lee Rush, Jr.	Present	Present
HENRY	John E. Neumann, Sr.	Present	Present
.....	Joe D. Mobley (Alt.)	Present	Present
MEMPHIS-SHELBY	Rex A. Amonette	Present	Present
.....	Shed H. Caffey	Present	Present
.....	Dee J. Canale	Present	Present
.....	Fenwick W. Chappell	Present	Present
.....	F. Hammond Cole, Jr.	Present	Present
.....	Rufus E. Craven	Present	Present
.....	Loren Crown	Present	Present
.....	McCarthy DeMere	Present	Present
.....	Phillip H. Dimmeyer	Present	Present
.....	Thomas G. Dorrity	Present	Present
.....	Hamel B. Eason	Present	Present
.....	Hugh Francis, Jr.	Present	Present
.....	Hollis H. Halford	Present	Present
.....	Dennis A. Higdon	Present	Present
.....	James C. Hunt	Present	Present
.....	George S. Lovejoy	Present	Present
.....	Robert C. McEwan	Present	Present
.....	Evelyn B. Ogle	Present	Present
.....	Phil E. Orpet, Jr.	Present	Present
.....	James W. Pate	Present	Present
.....	Phillip A. Pedigo	Present	Present
.....	John M. Reisser	Present	Present
.....	Charles W. White	Present	Present
NORTHWEST	Arden J. Butler, Jr.	Present	Present
.....	J. Ralph Reynolds	Present	Present
TIPTON	J. Barret Matthews	Present	Present

The above information was taken from attendance record cards signed by the delegates.



**TENNESSEE
MEDICAL
ASSOCIATION**

146th Annual Meeting

Knoxville, Tennessee
April, 1981





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1) Outgoing TMA President Dr. George A. Zirkle, Jr., Knoxville (right) relinquishing gavel to incoming President Dr. Allen S. Edmonson, Memphis. 2) Outstanding Physician of the Year Award recipient Dr. David P. McCallie, Chattanooga. 3) Distinguished Service Award recipient Dr. Thomas G. Dorrity, Memphis. 4) Distinguished Service Award is presented to Dr. J. Kelley Avery, Union City (left) by Dr. Robert E. Clendenin, Jr., TMA Board Chairman. 5) Distinguished Service Award is presented to Dr. Vernon E. Wilson, Nashville (left) by Dr. Clendenin. 6) Community Service Award recipients (left to right) Judge Wilford Parks, Jr., Lake County; Sister Thomas de Sales, Chattanooga; and Gene Roberts, Nashville. 7) AMA President Dr. Robert B. Hunter (foreground) accepts applause as Dr. Charles E. Allen, Speaker of the House (left) and Dr. Malcolm R. Lewis, Vice Speaker of the House, look on. 8) Newly installed TMA president Dr. Edmonson presiding. 9) Dr. & Mrs. Robert E. Clendenin, Dr. & Mrs. George A. Zirkle, and Dr. & Mrs. Allen S. Edmonson. 10) Entertainer Walter "Zaney" Blaney (second from left) amuses (left to right) Dr. James W. Hays, Dr. David H. Turner, Dr. Thomas K. Ballard, and Dr. William O. Miller. 11) Outgoing TMA Auxiliary President Mrs. Kenneth B. Rule, Knoxville (left) with incoming Auxiliary President Mrs. Luther A. Beazley, Jr., Nashville. 12) Dr. and Mrs. Rudolph H. Kampmeier, Nashville at the President's Banquet. (Dr. Kampmeier is the author of the newly published *History of the Tennessee Medical Association, 1930-1980*.)



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ALLEN S. EDMONSON

Doctors for Health Education?

Prevention is a buzzword currently in health care circles, especially governmental ones. Because it has been promoted along with some other more ominous terms such as "alternative methods of health care delivery" and "procompetition," it may not be receiving the attention from practicing physicians that it deserves. Aside from the commonplace immunization and routine public health measures, preventive medicine for the most part equates to health education. In my experience, education of adult patients even in only one disease area—their own—is rarely better than frustrating for the physician. There is usually widespread lack of interest and minimal compliance when the acute illness or crisis is over. We could and should make a better effort even though it is difficult. Maximum effort, however, should be expended in another age group—the young.

Health education in schools can prevent serious health problems in Tennesseans by giving our young citizens the information and philosophy of living necessary for them to assume a far greater responsibility for the care of their own health than would otherwise be possible. The potential effect on medical cost containment makes it almost mandatory that we do as good a job as possible on each child in every county; but are we?

Tennessee does not have a law requiring health education for all students. The State Board of Education has such a requirement for schools to be approved, but I am told that many Tennessee students are not instructed or, at best, not instructed efficiently in health matters.

While health instruction in schools is primarily the responsibility of educators, there is no more logical or important area of community activity for physician involvement. Physicians and organized medicine can contribute in the support and promotion of a complete program of health instruction throughout the school year.

This is a challenge we can't ignore. We as individuals must get involved and make health education a matter of medical pride all across Tennessee.

Allen S. Edmonson M.D.

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JUNE, 1981

editorials

Sesquicentennial Revisited

It's out!

At the Annual Meeting of TMA in Knoxville last week former *Journal* editor and TMA past-president Rudie Kampmeier was on hand to personally inscribe his newly published history of TMA's past fifty years. (And don't tell me I split an infinitive!) If you haven't gotten yours yet, run, don't walk—.

Some time before TMA's centennial in 1930, several attempts were made to start a history of what was then the Tennessee State Medical Association. Not until a professional historian, Philip M. Hamer, Professor of History at the University of Tennessee, was employed, how-

ever, did the project actually get off the ground. Even so, it was completed in time for the centennial. Although this second volume is a year late, it has the advantage of being complete through the sesquicentennial year.

As one peruses the volume, it soon becomes apparent that scholarship and literary style are not sacrificed by not having a professional historian as the writer; indeed, in choosing Dr. Kampmeier as its historian, TMA has come out a clear winner. Each page bears the unmistakable stamp of the scholarly physician who has been intimately associated with the organization since his arrival in Tennessee from his native Iowa, via teaching posts at Michigan and LSU, only four years after this half century began. A firm believer in organized medicine, he immediately became active in the Nashville Academy of Medicine, serving as a delegate to the TMA House of Delegates and Academy president. He went on to become *Journal* editor in 1950, a position he filled for 21 years, a delegate to the AMA House for ten years, and TMA president in 1963. The author, then, is a man who knows organized medicine in general, and TMA in particular, inside out.

It shows.

Now to the book itself. It is a handsome volume, bound in red leatherette embossed in gold, with TMA's seal on the front cover. It is organized into six sections, dealing with TMA's organization and its contributions to professional education, organized medicine, and society, respectively. A fifth section deals with the war years, and the sixth with the relationship between medicine and government. Plates show presidents and secretaries of the Association, *Journal* editors, and presidents of the AMA. There is no index.

No index?

Reasons for omission of the index, stated in a brief preface, are that coverage of each subject is brief, and should the reader require detail, he would need to consult the original sources cited in the volume. The book is written simply for the enjoyment of the Association's members, who can use the table of contents to direct them to specific topics. As the author intended it should be, it is enjoyable reading.

All those who have been active at all in organized medicine in Tennessee will of course want a copy. Chances are their names are in there, as every member of every committee is listed.

But, you say, I have never been active, so why should I want a copy?

I have only two comments on that. If you have not been active, so much the worse for you and your Association. Your friends have been in there working for you, though. Shouldn't you find out what they have been doing?

Kampmeier RH: *History of the Tennessee Medical Association, 1930-1980*. Nashville, Tennessee Medical Association, 1981, 544 pp. (A copy may be obtained from TMA. See order form in this issue.)

J.B.T.

Dogwood Trails Revisited

I was looking back at an editorial I wrote in 1978, the last time the Annual Meeting of TMA was held in Knoxville, in which I briefly mentioned the Dogwood Trails. My comment then was that words failed me in an attempt to describe the beauty of the Dogwood Trails. They still do, but not being timid, I am going to try.

I had been afraid the prolonged drought, which began last spring and extended through summer, fall, and winter, would have done irreparable harm to the woods. It wiped out the dogwood in our yard. But the drive from Nashville through the Cumberlands to Knoxville proved my fears unfounded. Whereas the dogwood usually follows the redbud, the spring rains, coming just in time, and the early warmth that followed close on, brought both out together. The redbuds completely covered some hillsides, where they apparently had been planted along the interstate, with a blanket of pink, and their pink pall appeared even more vivid set as it was against the pale green backdrop of new-leaved woods speckled with white. But that was just the woods.

For many years now, judging from the size of some of the trees, the inhabitants of Knoxville's Sequoyah Hills have been planting pink and white dogwood, and other flowering trees as well, making the trail which winds through the hills a wonder to behold. Meandering along Cherokee Boulevard and detouring through the maze of side streets, it follows the pink center stripe through a pink and white fairyland adorned with the red, salmon, and white of the azaleas, the lavender of lilacs and wisteria, and all the colors of the rainbow in beds and borders of flowers. Dappled by the shifting light and shadows and trembling in a soft breeze, trees and

flowers were gilded for brief instants by the late afternoon sun. And down in the park along the Tennessee River lovers walked the paths hand in hand, and in the open spaces yelping packs of progeny of those just older were loosely—and tenuously—organized into teams rather casually trying their hand at baseball as they waited for their elders to spread the picnic.

Hidden in the agenda of the TMA House of Delegates was a sleeper. It was a resolution originated by the Board of Trustees which requires that in planning future meetings of the Association, attention be given to finding facilities that would accommodate both the TMA and the TMA Auxiliary “in reasonable proximity to one another.” This of course has a great deal of merit. Its implications depend upon what is considered “reasonable,” but it was interpreted to mean “under one roof.” At present, only Opryland has a facility that will satisfy such a tight interpretation. Perhaps this is a backhanded way of accomplishing what was tried last year and failed, largely through a coalition of the Nashville and Memphis delegations; a motion was made then that because of the great success of the meeting at Opryland, it should be held there every year.

There is something to be said for such an arrangement, Opryland's superb facilities aside. It is a long way from the Tri-Cities to Memphis, and the central location has a lot of appeal. Against it, of course, is the burden it would place on the Nashville physicians and Auxiliary, and the desire of Chambers of Commerce of the other metropolitan areas not to be left out. (Some years ago there was a move to have it in Gatlinburg every year.) The obvious plus for the present arrangement is that it gives some of us an opportunity to spend a few days in places we don't often get to. Such as Knoxville in dogwood season.

J.B.T.

Green-Up

My wife declined an invitation to join me on a trip to Chicago for a couple of days because, she said, she didn't see any use in changing spring for winter. Spring—that's the time, says Johnny Carson, when Hollywood changes its brown plastic plants for green plastic plants. Too bad for Hollywood.

Not for Tennessee, though.

The slanting rays of the sun, just up, add a

golden tint to yards pink with clover and make diamonds of the dew drops that send a film of mist skimming over the ground in the faint breeze. Bradford pears, crab apple, flowering quince, and the ever-present jonquils and forsythia make a flaming artist's palate of block after block, their faces washed clean and sparkling by a pre-dawn rain.

"The world is too much with us," said the poet. He was talking about the world the Bible also refers to as mammon, the World associated in story with the Flesh and the Devil, and not the one I see around me now. What I see around me is God's world — my Father's world — which He saw was very good. This is the world that makes the other one tolerable. And it is the one mammon is trying its best to destroy.

I go to work early, when dew still sparkles and the birds are calling the worms up out of the moist turf. I go by back roads so that in my nostrils will be the perfume of flowers and lawns instead of disintegrating hydrocarbons and compounds of sulfur. A little later, traffic-watching replaces nature-watching, and the hustle and bustle of mammon takes over.

Spring comes renewing the brown earth and bare trees, clothing them in garments more lordly than anything mammon has to offer. It comes unbidden, responding to no man's call. Spring is God's gift of life to a world hungering for beauty.

As we pave God's world, flood it with exhaust, and cover it with ejecta, we need to remember that although we cannot call Spring up, we can turn it off.

J.B.T.



More on Child Restraints

To the Editor:

It is difficult for me to respond to Dr. Halbert B. Dodd's letter in the March 1981 issue of the *Journal* (*J Tenn Med Assoc* 74:210, 1981). I say it is difficult because it is not easy to respond to such a letter when one's "blood adrenaline" level is high.

Upon reading Dr. Dodd's letter I must assume that he is *against* the mandatory immunization for childhood diseases which our state says parents must see

their children get; against all speed limits on our highways; for the repealing of all laws that would prosecute for murder, rape, theft, embezzlement and a host of other acts. By taking all these, and others off the books, we could reduce the bureaucrats in Nashville to zero — not to mention its effect upon Washington!

I note that Dr. Dodd lists his specialty as "cardiovascular medicine," therefore I assume that it is not mandatory for his patients to take the anti-hypertension medication he prescribes, does not have his patient on an anti-obesity program and smoking of cigarettes are in order.

I hope the good doctor has never seen a child's skull that has been thoroughly crushed, after hitting the windshield or dash on its parents' car, who thought it was an "invasion of his and the child's rights" to have proper restraints to prevent such a tragedy. Too many of us across this state have and that is why we believe such a law should be on the books and *enforced*.

William P. Hardy, M.D.
Medical Arts Bldg.
Oak Ridge, TN 37830

To the Editor:

Dr. Halbert B. Dodd, II, M.D., of Union City expresses dismay in the March issue of the state *Journal* regarding the law which has been passed making it unlawful for a child to ride unrestrained in an automobile on the highways of Tennessee (*J Tenn Med Assoc* 74:210, 1981). The chief concern seems to be that this is an unnecessary law which interferes with "freedom" of parents to do as they wish with their children. He makes certain exaggerated suggestions for severe penalties for various minor infractions. I believe he misses the point.

Would Dr. Dodd have us repeal the mandatory immunization laws which protect our children from various contagious diseases? These laws interfere with certain "freedoms" and require bureaucrats to administer them.

Would he have us repeal the child abuse laws which makes it unlawful for a physician to fail to report a suspected case of child abuse? Doesn't the parent have the right to discipline the child in any way he sees fit?

Would he have us repeal the compulsory education laws for children? Doesn't this interfere with the parents' ability to rear their children in any way they desire?

There are any number of laws which reduce our freedom and I am in sympathy with the idea that we should have as little government and as few bureaucrats as possible. However, I think the child restraint law is essential in order at least to draw the attention of the desirability of the irresponsible segment of our

population (which is considerable) to protecting their children from the harmful effects of riding unrestrained.

Felix G. Line, M.D.
417 Holly St. at E. 5th Ave.
Knoxville, TN 37917



William W. Aycock, age 70. Died April 5, 1981. Graduate of University of Tennessee College of Medicine. Member of Memphis-Shelby County Medical Society.

Horace G. Brown, age 83. Died March 23, 1981. Graduate of Vanderbilt University School of Medicine. Member of Knoxville Academy of Medicine.

Price H. Duff, age 68. Died March 30, 1981. Graduate of Vanderbilt University School of Medicine. Member of Nashville Academy of Medicine.

Edward Tsong S. Huong, age 38. Died March 28, 1981. Graduate of National Taiwan University College of Medicine. Member of Coffee County Medical Society.

new members

The JOURNAL takes this opportunity to welcome these new members to the Tennessee Medical Association.

CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY

James W. Varner, M.D., Chattanooga

KNOXVILLE ACADEMY OF MEDICINE

T. Craig Beeler, M.D., Knoxville

H. Lynn Massingale, M.D., Knoxville

Una L. Mullooney, M.D., Knoxville

Robert J. Salzman, M.D., Knoxville

Bradford W. Smith, M.D., Knoxville

Robert A. Wild, M.D., Knoxville

LINCOLN COUNTY MEDICAL SOCIETY

William R. Jones, M.D., Fayetteville

Robert W. Orgain, M.D., Fayetteville

MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

R. Mark Kendrick, M.D., Memphis

John Beauchamp Kirkley, M.D., Memphis

Dana L. Latour, M.D., Memphis

John R. Lindermuth, M.D., Memphis

Jack H. McCubbin, M.D., Memphis

E. Louise Pinson, M.D., Memphis

J. Kenyon Rainer, M.D., Memphis

Robert F. Sauter, M.D., Memphis

James Warren Williams, M.D., Memphis

MONTGOMERY COUNTY MEDICAL SOCIETY

Angel U. Perales, M.D., Madison

NASHVILLE ACADEMY OF MEDICINE

Lily Heidi Chen, M.D., Nashville

K. Timothy North, M.D., Madison

NORTHWEST TENNESSEE ACADEMY OF MEDICINE

Robert G. Patrick, M.D., Martin

SULLIVAN-JOHNSON COUNTY MEDICAL SOCIETY

Charles A. Mitchell, Jr., M.D., Kingsport

Lovett P. Reddick, M.D., Kingsport

WASHINGTON-CARTER-UNICOI COUNTY MEDICAL ASSOCIATION

Mary Wyche, M.D., Johnson City

personal news

Anne B. Avery, M.D., Knoxville, is only the second woman in the Great Smoky Mountain Council, Boy Scouts of America, to receive the coveted Silver Beaver Award, the highest award given to a volunteer.

Clifton R. Cleaveland, M.D., Chattanooga, has been installed as governor for the Tennessee Region of the American College of Physicians.

Lloyd V. Crawford, M.D., Memphis, has been elected second vice president of the American College of Allergists.

Edwin W. Edwards, M.D., Jackson, has been certified by the American Society of Hematology.

Stephen Hammond, Sr., M.D., Jackson, has been certified as a Diplomate of the American Board of Obstetrics and Gynecology.

Phillip Hayes, M.D., Dickson, who was appointed a member of the Tennessee Wildlife Resources Commission by Gov. Lamar Alexander in 1979, has been elected secretary of the commission, effective April 1981.

James C. Hunt, M.D., Memphis, chancellor of the University of Tennessee Center for the Health Sciences, has been named to a three-year term on the Statewide Health Coordinating Council.

A. A. Ibrahim, M.D., Elizabethton, has been certified as a Diplomate of the American Board of Surgeons.

David Jones, M.D., Johnson City, has been certified as a Diplomate of the American Board of Urology.

Augustus McCravey, M.D., Chattanooga, has received one of the first three Distinguished Service Awards ever given by the Southern Neurosurgical Society, the third largest neurosurgical society in the world.

John Oates, M.D., Nashville, has been elected president of the Association of American Physicians.

John T. Purvis, M.D., Knoxville, has been elected chairman of the Southeast Quadrant of the Council for State Neurosurgical Societies.

Paul C. Thompson, M.D., has been elected chief of staff at Parkridge Hospital in Chattanooga. Other officers elected include *Joel E. Avery, M.D.*, vice chief of staff; and *Walter H. King, M.D.*, secretary.

medical news in tennessee

UTCHS Names Medical Dean

Dr. Robert L. Summitt, associate dean for academic affairs in the University of Tennessee College of Medicine since January 1979, was named dean by James C. Hunt, M.D., chancellor of the UT Center for the Health Sciences.

Summitt, who joined the College of Medicine faculty in 1964, assumed the dean's post April 1.

Professor of pediatrics, anatomy and child development, the new dean has been chief of the genetics section of the department of pediatrics and director of the genetics laboratory of the Child Development Center during his tenure on the faculty. He has conducted extensive research into the causes and prevention of genetic disorders.

Summitt was born in Knoxville and raised in LaFollette in nearby Campbell County. He attended Davidson College in North Carolina and the University of Tennessee at Knoxville as an undergraduate. He received his M.D. degree at UTCHS in 1955, and served an internship at the UT Memorial Research Center and Hospital in Knoxville, with residency training in pediatrics at UTCHS.

TMA Members Receive AMA Physician's Recognition Award

Thirty-seven TMA members qualified for the AMA Physician's Recognition Award during the month of March 1981.

To qualify for the PRA, a minimum of 150 hours of continuing medical education must be earned over a three-year period; 60 of these hours must be Category 1.

This list does not include members who reside in other states. Names of additional PRA recipients will be published as they are received from AMA.

Daniel F. Beals, M.D., Knoxville
Keith H. Byrd, M.D., Kingsport
John E. Chapman, M.D., Nashville
Sung Jang Chung, M.D., Morristown
Murrell O. Clark, M.D., Chattanooga
Douglas C. Cobble, M.D., Greeneville
Paul S. Crane, M.D., Nashville
Bruce E. Dahrting, M.D., Chattanooga
Charles E. Darling, M.D., Oak Ridge
John M. Dobson, M.D., Memphis
J. Vance Fentress, M.D., Pulaski
James R. Gray, M.D., Lebanon
Charles W. Hawkins, M.D., Chattanooga
Douglas C. Henry, M.D., Nashville
William H. Hill, M.D., Madison
David H. Horowitz, M.D., Nashville
Edwin C. Jordan, M.D., Clarksville
Dilip N. Joshi, M.D., Jamestown
Colin L. Kamperman, M.D., Alcoa
Albert L. Maduska, M.D., Memphis
Rogelio D. Martinez, M.D., Nashville
Joseph W. Miles, M.D., Clarksville
Kenneth T. Miller, M.D., Oak Ridge
Dewey G. Nemec, M.D., Nashville
Lawrence R. Nickell, M.D., Columbia
Reinaldo A. Olaechea, M.D., Crossville
Ronald E. Overfield, M.D., Nashville
Robert L. Pettus, M.D., Madison
Robert W. Schafermeyer, M.D., Knoxville
Burton Silbert, M.D., Nashville
Lyle R. Smith, M.D., Kingsport
Robert A. Valosik, M.D., Nashville
Pramod B. Wasudev, M.D., Nashville
Roland M. Webster, M.D., Strawberry Plains
Gary J. Whitesell, M.D., Donelson
H. James Wiesman, M.D., Columbia
Guy Zimmerman, M.D., Cookeville

From the AMA's Office in Washington, D.C.

FTC Eliminates Blue Shield Rule Threat

The threat of federal intervention against physicians sitting on policymaking boards of Blue Shield or similar medical insurance plans has been lifted by the Federal Trade Commission.

The agency abandoned a two-year-old proposal by the Commission's Bureau of Competition that the FTC issue a rule limiting control physicians or medical societies may have over the 70 Blue Shield boards.

Additional studies have contradicted original staff findings that health care costs were higher in areas where physicians controlled Blue Shield boards, FTC officials said. They also noted that consumer representation has increased on boards in recent years.

The Commission's decision to abandon the industry-wide effort was unanimous and came after less than 50 minutes of debate and without a formal vote.

The Blue Shield proposal was one of a series aimed at health care providers and insurers in recent years and ranked in importance only behind the FTC's action against the AMA's code of ethics involving physician advertising.

Blue Shield plans disputed the FTC's staff allegations that physician reimbursement was higher where physicians exercised significant control over local Blue Shield plans.

Instead of an industry-wide rule on the matter, an action that probably would have been protested in court, the FTC decided to seek any abuse on a case-by-case basis.

The controversial staff report, which received prominent media attention at the time, charged that control by the medical profession of insurance plans is so pervasive that some physicians call Blue Shield "the economic arm of the medical profession."

In a statement on the FTC's action, Walter McNerney, president of Blue Cross-Blue Shield, said the decision "vindicates" the Blue Shield position that the presence of physicians on Blue Shield boards does not produce higher fees. He said the staff recommendation was in part a "complete reversal" of previous findings.

Acting FTC Chairman David Clanton said the new analysis "suggests that some previously suspected relationships do not hold, but the study still shows a troublesome relationship between medical society involvement on Blue Shield boards and fee levels for

several expensive medical procedures."

Clanton said the FTC should proceed selectively "using a rule of reason approach" that takes into account the share of the market possessed by a plan, the degree of physician participation in fee setting, and the plan's coverage.

Congress Gets HMO Plan

The administration has sent Congress legislation phasing out federal financial support for health maintenance organizations (HMOs).

The bill will "help ensure that health maintenance organizations and other modes of health delivery face a fair test in the marketplace," said Richard Schweiker, Secretary of the Health and Human Services (HHS) Department, in a letter of transmittal.

Schweiker said the federal aid has given HMOs "an advantage over other forms of health delivery."

The bill eliminates certain federal restrictions on HMOs "that have inhibited their ability to compete successfully," Schweiker said. The bill authorizes appropriations of \$1 million for the next three fiscal years for HMO training and technical assistance and \$35 million yearly for the HMO loan fund.

No federal assistance would be provided for starting up any new HMO.

Other provisions of the bill would (1) remove mental health and substance abuse services from the list of required services and make them optional, and (2) repeal current limitations as to HMOs contracting with individual physicians for the provision of health services and clarify what percentage of services could be contracted by an HMO.

Earlier, the AMA had told the Congress that now is the time to end federal aid for HMOs.

"What was envisioned in 1973 as a justifiable manipulation of marketplace forces to foster the development of HMOs now is perceived as undue interference with matters of choice best left to the consumer," the AMA said in a statement to the House Commerce Subcommittee on Health.

The growth of any one form of health care delivery—prepaid plans, fee-for-service, etc.—should not be determined by federal subsidies, by preferential treatment under law, or by federally financed advertising campaigns, the AMA said. Rather, the decision should be made by popular choice in a free competitive system.

The AMA said that experience has shown that the HMO program "has not been entirely successful in developing qualified HMOs and the fact remains that the vast majority of individuals who are enrolled in prepaid group practices—HMOs—are enrolled in plans that did not receive federal assistance."

The AMA pointed out that the HMO loan fund which has provided \$128 million to HMOs since 1973 is now in a deficit position because 11 HMOs have

gone bankrupt. Another 38 plans are experiencing financial problems, raising the total to more than one-fifth of federally qualified HMOs that are in trouble.

Med Schools May Be Forced To Cut

An abrupt halt to capitation aid would force medical schools to retrench some of their essential programs, the AMA has told Congress.

Urging the lawmakers to phase out gradually the federal program of general institutional support, the AMA said this assistance "has served the public interest by aiding and improving the quality and availability of medical education and medical care. While the amount that an institution can receive under this program is not great, these funds are flexible and enable medical faculties to focus their use on their institutions' needs and the needs of the community."

The AMA statement was submitted to the Senate Labor and Human Resources Committee which is considering legislation to extend health manpower legislation. The administration wants to cut back on aid and to terminate the capitation program. The Senate and House last year approved different bills and could not agree to compromise legislation before session's end.

A phase out of capitation aid would allow "those institutions that rely on these monies time to develop other sources of funds while continuing without the substantial disruption that would be caused by the total elimination of the program," the AMA told the committee.

Student assistance must be of the highest priority for government action, the AMA said. "Access to medical education must not be allowed to become limited on the basis of income."

Administration Cites Health Priorities

The administration's task force on regulatory relief has singled out three health regulations for priority review as to whether modification is necessary to make them less burdensome. They are:

- New Drug Applications—Delays in the existing process of approving new drugs by the Food and Drug Administration "justifies a thorough review."
- Medicaid Regulations—States contend that these regs hamper their ability to provide services to needy people at reasonable funding levels, according to the task force.
- Health Care Institution Certification and Surveys—Hospitals, nursing homes and other institu-

tional providers "are subject to myriad, frequent and duplicative surveys and reviews."

Vice President George Bush, chairman of the task force, urged the public to notify his agency of rules and regulations that people find onerous and unnecessary.

Average Statistics Per Patient Visit Cited

The American patient in 1977 was billed, on the average, \$21.29 for a visit to a physician. The patient waited seven days for the appointment and spent about 30 minutes waiting in the physician's office, according to preliminary findings of a large federal study on the costs and delivery of health care in 1977.

The patient paid \$14.69 of the average charge for a visit, with the remainder being covered by private health insurance (\$3.41), Medicaid (\$1.49), Medicare (\$0.85), and other sources (\$0.85), the National Center for Health Services Research (NCHSR) study found.

Longer waiting times were noted for appointments to obtain hospital outpatient services (10 days) and visits associated with preventive services, such as prenatal care or eye examinations in a physician's office (14 days).

Hospital outpatient departments also ranked highest in the amount of time a patient spent waiting to see a doctor—45 minutes. Hospital emergency rooms kept patients waiting an average of 38 minutes, and physician offices an average of 29 minutes.

announcements

CALENDAR OF MEETINGS

NATIONAL

- | | |
|----------------|---|
| July 5-10 | National Rehabilitation Conference — Diplomat Hotel, Hollywood, Fla. |
| July 17-19 | Endocrine Society—Stouffer's Inn, Cincinnati |
| July 26-30 | Flying Physicians Association—Sheraton Twin Towers, Orlando, Fla. |
| July 30-Aug. 2 | International Doctors in Alcoholics Anonymous—Cleveland Marriott Inn, Beachwood, Ohio |

STATE

- | | |
|------------|--|
| July 24-25 | Clinical Management of Coronary Disease and Exercise Testing (sponsored by International Medical Education Corp.)—Hyatt Regency, Nashville |
|------------|--|

RESULTS OF ORAL THERAPY revealed a high percentage of treatment failures with penicillin V potassium, but *no* failures with Tegopen.

		Given Tegopen® (cloxacillin sodium)	Given penicillin V-K
<i>Staphylococcus aureus</i>	(78 patients)	39	39
Returned to clinic at one week	29†	38†	
Treatment failure at one week	0	18 (47.4%)	
<i>Staphylococcus aureus</i> and <i>Streptococcus pyogenes</i>	(9 patients)	4	5
Returned to clinic at one week	4	5	
Treatment failure at one week	0	2 (40%)	
No initial bacterial growth	(14 patients)	9	5
All 14 healed, regardless of which antibiotic was administered.			
Beta-hemolytic <i>Streptococcus</i>	(1 patient)	0	1
TOTALS:	102 patients	52 patients	50 patients

†Eleven patients did not return for their one-week checkup. These were all called by telephone, and their families reported

the lesions had healed. One patient was dropped from the study, early, because of adverse reaction to medication.

STUDY: DESCRIPTION/PROTOCOL

- 102 nonselected subjects, with initial bacteriology as follows: 77% *Staphylococcus aureus*, 9% mixed *Staphylococcus aureus* and *Streptococcus pyogenes*, and 1% beta-hemolytic *Streptococcus*.†
- All patients were given randomized therapy—Tegopen capsules or oral solution, or penicillin V-K tablets or oral solution, in recommended dosages according to body weight.

- All patients were evaluated after one week's therapy. If there was no improvement, therapy was switched to the other antibiotic. The "other antibiotic" proved to be Tegopen 100% of the time because no treatment failures had occurred with Tegopen.
- A final assessment of progress was made two weeks after initiation of Tegopen therapy.

†The remainder, to equal 100%, consisted of 14 patients (13%) who exhibited no initial bacterial growth. These 14 were all healed, whether given Tegopen or penicillin V-K.

TEGOPEN®

(cloxacillin sodium)

-effective therapy for staph infections of the skin and skin structures

WARNING:

Serious and occasionally fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin therapy. Although anaphylaxis is more frequent following parenteral therapy it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with a history of sensitivity to multiple allergens.

There have been well documented reports of individuals with a history of penicillin hypersensitivity reactions who have experienced severe hypersensitivity reactions when treated with a cephalosporin. Before therapy with a penicillin, careful inquiry should be made concerning previous hypersensitivity reactions to penicillins, cephalosporins, and other allergens. If an allergic reaction occurs, the drug should be discontinued and the patient treated with the usual agents, e.g., pressor amines, antihistamines, and corticosteroids.

Safety for use in pregnancy has not been established.

PRECAUTIONS:

The possibility of the occurrence of superinfections with mycotic organisms or other pathogens should be kept in mind when using this compound, as with other antibiotics. If superinfection occurs during therapy, appropriate measures should be taken.

As with any potent drug, periodic assessment of organ system function, including renal, hepatic, and hematopoietic, should be made during long-term therapy.

ADVERSE REACTIONS:

Gastrointestinal disturbances, such as nausea, epigastric discomfort, flatulence, and loose

stools, have been noted by some patients. Mildly elevated SGOT levels (less than 100 units) have been reported in a few patients for whom pretherapeutic determinations were not made. Skin rashes and allergic symptoms, including wheezing and sneezing, have occasionally been encountered. Eosinophilia, with or without overt allergic manifestations, has been noted in some patients during therapy.

USUAL DOSAGE:

Adults: 250 mg. q.6h.

Children: 50 mg./Kg./day in equally divided doses q.6h. Children weighing more than 20 Kg. should be given the adult dose. Administer on empty stomach for maximum absorption.

N.B.: INFECTIONS CAUSED BY GROUP A BETA-HEMOLYTIC STREPTOCOCCI SHOULD BE TREATED FOR AT LEAST 10 DAYS TO HELP PREVENT THE OCCURRENCE OF ACUTE RHEUMATIC FEVER OR ACUTE GLOMERULONEPHRITIS.

SUPPLIED:

Capsules—250 mg. in bottles of 100. 500 mg. in bottles of 100.
Oral Solution—125 mg./5 ml. in 100 ml. and 200 ml. bottles.

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The continuing medical education accreditation program of the TMA has full approval by the Accreditation Council for Continuing Medical Education. An accredited institution or organization may designate for Category 1 credit toward the AMA Physician's Recognition Award those CME activities that meet appropriate guidelines. If you wish information as to how your hospital or society may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203.

IMPORTANT NOTICE

Published in this section are all educational opportunities which come to our attention which might be of interest to our membership. As some of these are very long, full year schedules, and others are detailed descriptions of courses, in order to conserve space, most of them will be published in only one issue of the Journal.

IN TENNESSEE

VANDERBILT UNIVERSITY

Clinical Training Program

Opportunities for advanced clinical education for physicians in family practice and in various subspecialties have been developed by the School of Medicine and the Division of Continuing Education of Vanderbilt University. The practicing physician, with the guidance of the participating department chairman, can plan an individualized program of one to four weeks to meet recognized needs and interests. The experience will include contact with patients, discussion with clinical and academic faculty, conferences, ward rounds, learning individual procedures, observing new surgical techniques, and access to excellent library resources. Experience in more than one discipline may be included.

Participating Departments and Divisions

Allergy & Immunology	Samuel Marney, M.D.
Anesthesiology	Bradley E. Smith, M.D.
Cardiology	Gottlieb C. Friesinger, III, M.D.
Chest Diseases	James D. Snell, M.D.
Clinical Pharmacology	John A. Oates, M.D.
Dermatology	Lloyd King, M.D.
Diabetes	Oscar B. Crofford, M.D.
Endocrinology	David Rabin, M.D.
	David N. Orth, M.D.
Gastroenterology	Steven Schenker, M.D.
General Internal Medicine	W. Anderson Spickard, M.D.
Hematology	Sanford B. Krantz, M.D.
Infectious Diseases	Zell A. McGee, M.D.
Medicine	Grant W. Liddle, M.D.
Neurology	Gerald M. Fenichel, M.D.
Obstetrics & Gynecology	Lonnie S. Burnett, M.D.
Oncology	Robert Oldham, M.D.
Orthopedics	Paul W. Griffin, M.D.
Pathology	William H. Hartmann, M.D.
Pediatrics	David T. Karzon, M.D.
Psychiatry	Marc H. Hollender, M.D.
Radiology	A. Everette James, Jr., Sc.M., J.D., M.D.
Renal Diseases	H. Earl Ginn, M.D.
Rheumatology	Theodore Pincus, M.D.
Surgery	
Cancer Chemotherapy	Vernon H. Reynolds, M.D.
General	H. William Scott, Jr., M.D.
Neurological	William F. Meacham, M.D.
Ophthalmology	James H. Elliott, M.D.
Oral	H. David Hall, D.M.D.

Pediatric	James A. O'Neill, M.D.
Plastic	John B. Lynch, M.D.
Renal Transplantation	Robert E. Richie, M.D.
Thoracic & Cardiac	Harvey W. Bender, M.D.
Urology	Robert K. Rhamy, M.D.

Eligibility: All licensed physicians are eligible. **Administrative Fee:** \$200 per week. **Credit:** AMA Physician's Recognition Award (Category 1) and AAFP Continuing Education Accreditation. **Application:** For further information and application, contact Paul E. Slaton, M.D., Director, Continuing Medical Education, Vanderbilt University Medical Center, Nashville, TN 37232, Tel. (615) 322-2716.

Continuing Education Schedule

July 9-10	Neurology and Speech Pathology: The Problem of Aphasia
July 16-18	3rd Annual Mountain Meeting (Internal Medicine)—Asheville, N.C. (12 hours)
July 22-25	4th Annual Symposium on Contemporary Clinical Neurology—Hilton Head Island, S.C. (16 hours)
Sept. 17-19	3rd National Frontiers in Nutrition Conference—Hilton Head, S.C.
Sept. 18-19	12th Annual Pediatrics Symposium: Immunology and Allergy
September	Blood Banking: Recent Medical and Technical Advances
October	J. William Hillman Visiting Professor in Orthopedics
Oct. 1-4	3rd Annual Medical Alumni Symposium
Oct. 28-30	Robert M. Buchanan Lecturer in Dermatology
Oct. 29-31	Update in Therapeutic Decision-Making (ACP Regional Meeting Scientific Sessions)
November	Annual Rhamy-Shelley Lectureship in Urology
November	Update in Anesthesiology
Dec. 4-5	High Risk Obstetrics Seminar and the Everett M. Clayton Memorial Lecture (10 hours)

For information contact Division of Continuing Medical Education, Vanderbilt School of Medicine, Nashville, TN 37232, Tel. (615) 322-2716.

MEHARRY MEDICAL COLLEGE

Extended Continuing Education Program

Arrangements have been made with the following services and departments in the medical school to allow practicing physicians to participate in that service's activities for a period of one to four weeks. This program provides an opportunity for physicians to study in depth for a specified period. The schedule of activities is individualized in response to the physician's request by the participating department. The experience includes conferences, ward rounds, audiovisual materials and contact with patients, residents and faculty.

Participating Departments

Anesthesiology	Ramon S. Harris, M.D.
Family Practice	John Arradondo, M.D.
Internal Medicine	
Cardiology	John Thomas, M.D. Kermit R. Brown, M.D. Qamar A. Kahn, M.D.
Chest Disease	Joseph M. Stinson, M.D. Paul A. Talley, M.D. Edward A. Mays, M.D.
Dermatology	Thomas W. Johnson, M.D. David Horowitz, M.D.
Gastroenterology	Ludwald O. P. Perry, M.D. Buntwal M. Somayaji, M.D.
General Medicine	Edward A. Mays, M.D.
Hematology/Oncology	Robert S. Hardy, M.D.
Neurology	Calvin L. Calhoun, Sr., M.D. Gregory Samaras, M.D.
Obstetrics & Gynecology	Henry W. Foster, M.D.
Ophthalmology	Axel C. Hansen, M.D.
Orthopedics	Wallace T. Dooley, M.D.
Pathology	Louis D. Green, M.D. John C. Ashurst, M.D.
Pediatrics	E. Perry Crump, M.D.
Surgery	
General	Louis J. Bernard, M.D.
Neurological	Charles E. Brown, M.D.
Thoracic and Cardiovascular	David B. Todd, M.D. Ira D. Thompson, M.D.
Urology	Marcelle R. Hamberg, M.D.

Fee: \$100 per week. **Credit:** AMA Physician's Recognition Award (Category 1), AAFP Continuing Education Accreditation, and Continuing Education Units by Meharry Medical College. **Application:** For further information contact Frank A. Perry, Sr., M.D., Director, Continuing Education, Meharry Medical College, 1005 18th Ave. North, Nashville, TN 37208, Tel. (615) 327-6235.

EAST TENNESSEE STATE UNIVERSITY

July 18	Basic Science Review III: Psychopharmacology
Aug. 15	Stress in Medical Practice
Sept. 19	Advances in Laboratory Medicine
Oct. 7-9	Infection Control
Oct. 16	Pediatrics Prep III: Neonatology
Nov. 2-6	CPR: Faculty Inservice

For information contact Office of Continuing Medical Education, East Tennessee State University, Quillen-Dishner College of Medicine, Johnson City, TN 37614, Tel. (615) 928-6426, ext. 204.

UNIVERSITY OF TENNESSEE

Continuing Education Schedule

This comprehensive listing of UTCHS courses includes programs of the Chattanooga, Knoxville, and Memphis units. The codes (C), (K), and (M) indicate the continuing education unit handling the arrangements for a particular program.

July 9-11	(M)	Recognition and Management in Valve Disease and Cardiomyopathy—Snowmass, Colo.
Aug. 12-15	(C)	Emergencies in Obstetrics and Gynecology—Gatlinburg
Sept. 11	(M)	Practice Management
Sept. 11-12	(K)	A Workshop on Handicapped Child—Gatlinburg
Sept. 12	(K)	Practice Management
Sept. 17-18	(M)	13th Annual Conference on Mother,

Sept. 21-22	(C)	Fetus and Newborn Practical Skills in Diagnosis and Treatment of Disease
Oct. 3-4	(M)	Ultrasound: A Primer for the Beginner
Oct. 15-17	(K)	2nd Annual Seminar in Obstetrics and Gynecology
Oct. 22-23	(M)	Medical Alumni Days
Oct. 25-27	(K)	Cancer Concepts 1981
Nov. 13	(K)	Internal Medicine

Community-Based CME

Knoxville Campus

Blount Memorial Hospital; Maryville, Tenn.

Every Tuesday; 7-8 a.m. (1 hr. credit)

Jellico Hospital; Jellico, Tenn.

Monthly, third Tuesday; 7-9 p.m. (2 hrs. credit)

Morristown-Hamblen County Hospital; Morristown, Tenn.

Alternate months, third Tuesday; 6:30-8 p.m. (1.5 hrs. credit)

Sweetwater Community Hospital; Sweetwater, Tenn.

Monthly, second Wednesday; 12:00 noon (1 hr. credit)

Takoma Hospital; Greeneville, Tenn.

Monthly, dates vary; 6:30 p.m. (1-2 hrs. credit)

Memphis Campus

UPDATES IN MEDICINE

Carroll County Hospital; Huntingdon, Tenn.

McKenzie Memorial Hospital; McKenzie, Tenn.

Henry County Hospital; Paris, Tenn.

Monthly, third Monday; 6:15-9 p.m. (2 hrs. credit); locations rotate.

Nashville Memorial Hospital, Madison, Tenn.

Monthly, third Tuesday; 12:00 noon (1 hr. credit)

If you would like assistance in planning a community-based CME program, contact the Associate Dean for CME and every attempt will be made to assist you through one of our three campuses.

For further information about any of these courses, please call the appropriate individuals below:

- (C) Mr. LeRoy J. Pickles, Chattanooga
Tel. (615) 756-3370
- (K) Ms. Kay Laurent, Knoxville
Tel. (615) 971-3345
- (M) Ms. Grace Wagner, Memphis
Tel. (901) 528-5547

or write or telephone: James E. Farris, Ed.D., Director of CME, University of Tennessee College of Medicine, 800 Madison Ave., Memphis, TN 38163, Tel. (901) 528-5547.

IN SURROUNDING STATES

UNIVERSITY OF KENTUCKY

Mini-Residencies in Office Management Of Emotional Problems

The objective of this course is to give physicians an ideal emotional counseling technique that fits busy office practices. The technique uses a concept of emotions that is con-

sistent with human anatomy and psychophysiology. Yet, the technique requires no more physician time or patient cost than routine evaluations of new patients. Finally, the technique is readily understandable and easy for practitioners to apply.

One, two and three week courses. Minimum of 40 hours per week. *Tuition Fee:* \$350 per week for the 1st & 2nd week of training; \$500 for 3rd week of supervised practice with patients in the Intensive RBT Treatment Program.

For further information contact Maxie C. Maultsby, Jr., M.D., Office of Continuing Medical Education, Dept. of RBT, University of Kentucky, Lexington, KY 40506.

OF SPECIAL INTEREST

UNIVERSITY OF SOUTH FLORIDA

Aug. 2-8 Advances in Diagnostic Imaging—Hotel Scandinavia, Copenhagen, Denmark. *Credit:* 30 hours AMA Category 1. The following week an optional mini-symposium—Nuclear Medicine for the Diagnostician—offers 12 hours category 1 credit in Stockholm, Sweden, with a side trip planned for Helsinki, Finland.

For information contact Dr. L. R. Muroff, P.O. Box 17-241, Tampa, FL 33682, Tel. (813) 971-6000, ext. 297.

METHODIST HOSPITAL OF INDIANA

Sept. 25-27 2nd National Seminar on Community

Cancer Care (cosponsored by the Clinical Oncology Center)—Hyatt Regency, Indianapolis.

For information contact Office of Continuing Medical Education, Methodist Hospital of Indiana, Inc., 1604 N. Capitol Ave., Indianapolis, IN 46204.

INT'L. MEDICAL EDUCATION CORP.

Clinical Management of Coronary Disease and Exercise Testing

July 24-25 Hyatt Regency, Nashville
Aug. 14-16 Hilton Head Hyatt, Hilton Head, S.C.
Dec. 4-5 Hyatt Regency, Atlanta

Arrhythmias and Cardiac Ischemia

Oct. 23-24 Peachtree Plaza, Atlanta
Nov. 6-7 Le Pavillon, New Orleans

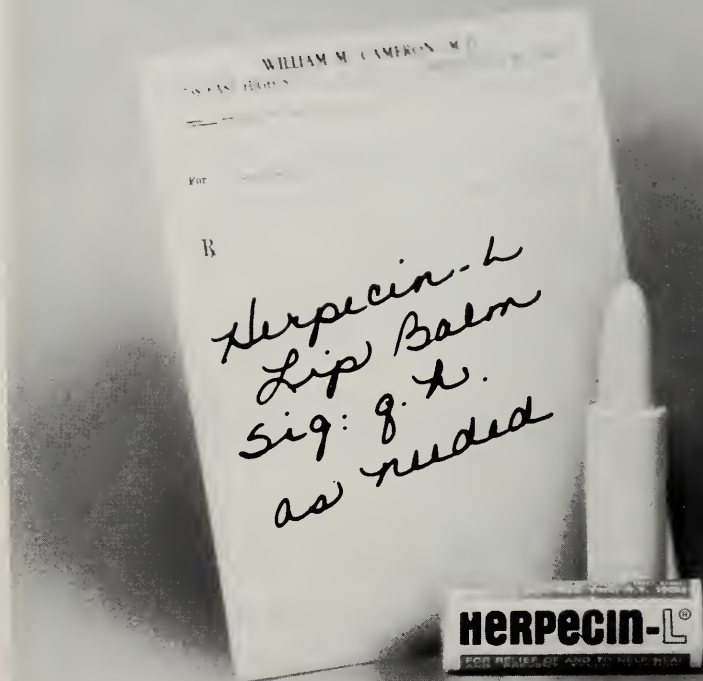
For information contact Director of CME, International Medical Education Corp., 64 Inverness Drive East, Englewood, CO 80112, Tel. (800) 525-8646, ext. 105.

ASSOCIATES OF OTOLARYNGOLOGY

July 31-Aug. 2 Ear, Nose & Throat Symposium for the Family Physician (cosponsored by the Porter Memorial Hospital and Swedish Medical Center)—The Lodge, Vail, Colo.

For information contact Lisa Lee, ENT Symposium, 950 E. Harvard, Suite 500, Denver, CO 80210, Tel. (303) 744-1961.

Dx: recurrent herpes labialis



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Highlights of the TMA Board of Trustees Meeting

April 8 and April 11, 1981

The following is a summary of the major actions taken by the Board of Trustees of the Tennessee Medical Association at the first session of its regular second quarter meeting, April 8, 1981.

THE BOARD:

Committee on Hospitals	Appointed Jeff Pennington, Jr., M.D., Madison, to the Committee on Hospitals filling the vacancy of Buntwal N. Somayaji, M.D.
Redistricting of State re: TMA Membership	Agreed that the Chairman appoint members of the Board representing each grand division of the state to a committee to study redistricting of divisions and that the committee report to the Board at the July meeting.
TMA Nominating Committee	Appointed John Wright, M.D., Nashville, to fill the vacancy of George W. Holcomb, Jr., M.D., on the Nominating Committee.
Commendation Resolution for Dr. Kampmeier	Agreed that a Resolution of Commendation be introduced in the House of Delegates meeting at the Wednesday session and read and voted upon at the Saturday session of the House in honor of Rudolph H. Kampmeier, M.D., Nashville, for his work on the <i>History of the Tennessee Medical Association 1930-1980</i> .
Reference Committee Assignments	Made Board and staff appointments to serve as resource representatives to each of the reference committees.
Primary Health Care Advisory Board	Nominated James W. Hays, M.D., Nashville, to the Primary Health Care Advisory Board.
Subcommittee on Liaison, Legislation, Funding and Community Education	Nominated Stephen Prinz, M.D., Knoxville, to replace Shelley F. Griffith, M.D., Athens, on the Subcommittee on Liaison, Legislation, Funding and Community Education.
TMA-SEF Board	Reappointed Robert L. Chalfant, M.D., Nashville, to the TMA-SEF Board.
IMPACT Board	Appointed Paul Nolan, M.D., Chattanooga, to the IMPACT Board of Directors representing the third district, filling the vacancy created by the death of William C. Patton, M.D., Chattanooga.
Tennessee Medical Foundation Board	Reappointed John B. Dorian, M.D., Memphis; W. David Dunavant, M.D., Memphis; and Lawrence R. Nickell, M.D., Columbia, to the Tennessee Medical Foundation Board.
Approval of Annual Audit	Approved the 1980 annual audit and the first quarter financial statement.
Report of SVMIC	Heard a report from Allen S. Edmonson, M.D., Memphis, on the activities of State Volunteer Mutual Insurance Company. He stated SVMIC plans to elect a member of the TMA Board of Trustees to the

SVMIC Board of Trustees and that with SVMIC Board approval, the remainder of the capital contributions made by policyholders will be repaid in May.

TMA Dues Refund Policy

Approved a TMA policy regarding the refund of dues paid by members. The policy states:

“Dues will be refunded upon request in the following circumstances:

- (1) An active member who, having paid the current year dues, dies on or before April 30. If death occurs after April 30, no refund will be made.
- (2) A member who is eligible for dues-exempt status (e.g., reached age 70 in the previous year) pays dues for the current year. Dues will be refunded for the current year only.
- (3) Other special case requests will be considered individually and determination made by the Executive Director.

It should be noted that this policy applies to refund of TMA dues only; requests for refund of AMA dues must be made in accordance with AMA guidelines and policy in effect at the time.”

Insurance Claims Seminars with AAMA

Approved a request from the Tennessee Chapter of the American Association of Medical Assistants for TMA to cosponsor insurance seminars with the AAMA throughout the various areas of the state. The request was referred to the Committee on Communications and Public Service for implementation.

Recognition of Retiring Board Members

Distributed plaques to the following retiring members of the Board in appreciation of their service on the Board of Trustees and to TMA: James W. Hays, M.D., Nashville; C. Eugene Jabbour, M.D., Memphis; Robert E. Clendenin, Jr., M.D., Union City; Clarence C. Woodcock, Jr., M.D., Nashville; and Gilbert A. Rannick, M.D., Johnson City.

The following is a summary of the major actions taken by the Board of Trustees of the Tennessee Medical Association at the second session of its regular second quarter meeting, April 11, 1981.

THE BOARD:

Election Results

Elected James C. Bradshaw, Jr., M.D., Lebanon, as chairman of the TMA Board of Trustees, and James T. Galyon, M.D., Memphis, as vice chairman of the Board. George H. Wood, M.D., Knoxville, was elected secretary-treasurer, and Mr. L. Hadley Williams was reelected assistant secretary-treasurer.

Elected as the five members of the Board's Executive Committee were Drs. Allen S. Edmonson, Memphis, chairman; James C. Bradshaw, Lebanon; George W. Holcomb, Jr., Nashville; George H. Wood, Knoxville; and George A. Zirkle, Jr., Knoxville.

Elected as the Finance Committee of the Board were Drs. George H. Wood, Knoxville, chairman; James R. Royal, Chattanooga; and C. Eugene Jabbour, Memphis.

Reelected as members of the Publications Committee were Drs. John

B. Thomison, Nashville, chairman; Addison B. Scoville, Nashville; and Oscar M. McCallum, Henderson.

Hospital Staff Privileges

Adopted as TMA policy the following statement regarding hospital staff privileges:

“Whereas, the establishment by the state of Tennessee of statewide requirements for hospital staff appointments would ignore the variability of local community resources and, more importantly, would be detrimental to the health care of the state. Now therefore be it

“Resolved, that the Tennessee Medical Association reaffirm the obligation and right of the Board of Trustees and/or governing body of each hospital in the state of Tennessee to grant staff appointments and determine practice privileges of health professionals seeking to practice in their institutions.”

Request from AMA Delegation

Endorsed the potential candidacy of A. Roy Tyrer, Jr., M.D., Memphis, should he decide to seek the office of AMA trustee.

Resolution 33-81

Directed staff to develop a plan to implement Resolution 33-81 on the Radiation Safety Act and that a report be given at the June Board meeting.

Resolution 36-81

Directed the Chairman to appoint a committee to investigate the potential impact of hospital expansion into ambulatory services upon patient care and physicians and report with recommendations to the House of Delegates in 1982.

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SPECIAL NOTICE TO CLINIC MANAGERS
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Semi-Annual Premiums Per \$25,000 of Group Term
Life Insurance Including Waiver of Premium in Case
of Total and Permanent Disability

<u>Age Nearest Birthday</u>	<u>Male Premium Per \$25,000</u>	<u>Female Premium Per \$25,000</u>	
Under 30	18	10	
30 - 34	19	12	←
35 - 39	28	14	<i>COMPARE THESE</i>
40 - 44	42	23	
45 - 49	70	37	<i>SEMI-ANNUAL</i>
50 - 54	119	62	
55 - 59	183	108	<i>RATES</i>
60 - 64	292	179	←
65 - 69	467	299	

Coverage is also available for **clinic employees in amounts from \$5,000 to \$50,000**. Guarantee issue in varying amounts is available to groups of 3 or more. Great-West Life Assurance Company of Winnipeg, Canada underwrites the plan and reserves the right to request evidence of insurability prior to issuing coverage if your group does not qualify for guarantee issue coverage.

TO APPLY OR TO OBTAIN ADDITIONAL INFORMATION
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OFFICERS AND COMMITTEES 1981-1982

Tennessee Medical Association

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President-Elect George W. Holcomb, Jr., M.D.,
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Vice President (East) . . . Hays Mitchell, M.D., Cleveland
Vice President (Middle) . . . Charles E. Jordan, M.D.,
Cookeville
Vice President (West) Howard W. Thomas, M.D.,
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Speaker—House of Delegates . . Charles E. Allen, M.D.,
Johnson City
Vice Speaker—House of Delegates
Malcolm R. Lewis, M.D., Nashville

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H. Trent Vandergriff, M.D. Maryville
George A. Zirkle, Jr., M.D. Knoxville

COUNCILORS

First District Nat E. Hyder, Jr., M.D., *Chairman* —
Johnson City
Second District . . John R. Nelson, Jr., M.D., *Secretary* —
Knoxville
Third District Paul E. Hawkins, M.D. — Chattanooga
Fourth District . . . Thurman L. Pedigo, M.D. — McMinnville
Fifth District William M. Young, M.D. — Fayetteville
Sixth District Luther A. Beazley, Jr., M.D. — Nashville
Seventh District Kenneth J. Phelps, Sr., M.D. —
Lewisburg
Eighth District James T. Craig, Jr., M.D. — Jackson
Ninth District Hobart H. Beale, M.D. — Martin
Tenth District Phillip H. Dirmeyer, M.D. — Memphis

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

Thomas K. Ballard, M.D. Jackson
David H. Turner, M.D. Chattanooga
Hamel B. Eason, M.D. Memphis
Charles B. Thorne, M.D. Nashville
A. Roy Tyrer, Jr., M.D. Memphis

ALTERNATE DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

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of the Institute for Scientific Information

TENNESSEE VALLEY MEDICAL ASSEMBLY

(Sponsored by the Chattanooga and Hamilton County Medical Society, Inc.)

CHATTANOOGA CHOO CHOO CONVENTION & CONCERT HALL

September 21-22, 1981

PRACTICAL SKILLS IN THE DIAGNOSIS AND TREATMENT OF DISEASE

Monday, Sept. 21, 1981

7:30 a.m.	Registration
8:15 a.m.	Allan L. Drash, M.D., Pittsburgh, "THE CHILD WITH DIABETES MELLITUS; NEW APPROACHES TO EVALUATION AND MANAGEMENT"
9:00 a.m.	Albert F. Heck, M.D., Memphis, "EVALUATION AND MANAGEMENT OF HEADACHES"
9:45 a.m.	COFFEE BREAK Exhibit Visitation
10:15 a.m.	Antonio C. deLeon, M.D., Washington, DC, "A REVIEW OF NORMAL/ABNORMAL HEART SOUNDS"
11:00 a.m.	Frank P. Bonikowski, M.D., Birmingham, AL, "EVALUATION AND MANAGEMENT OF DIZZINESS"
11:45 a.m.	Questions and Answers
12:00 noon	LUNCHEON Town Hall Theater Chattanooga Choo Choo
SPEAKER:	Antonio C. deLeon, M.D., Washington, DC
SUBJECT:	"PHYSICAL DIAGNOSIS OF THE CARDIAC PATIENT"
1:30 p.m.	Herbert R. Karp, M.D., Atlanta, "DISTINGUISHING THE AGED PATIENT WHO HAS CORRECTABLE BRAIN DISEASE"
2:15 p.m.	Nanette K. Wenger, M.D., Atlanta, "REHABILITATION AFTER MYOCARDIAL INFARCTION"
3:00 p.m.	COFFEE BREAK Exhibit Visitation
3:30 p.m.	H. Harlan Stone, M.D., Atlanta, "ANAEROBIC INFECTIONS—SURGEON'S SIDE OF THE STORY"
4:15 p.m.	John T. Sessions, Jr. M.D., Chapel Hill, NC, "AN APPROACH TO PATIENT WITH CHRONIC ABDOMINAL PAIN"
5:00 p.m.	Questions and Answers

Tuesday, Sept. 22, 1981

7:30 a.m.	Registration
8:15 a.m.	Jerry C. Daniels, M.D., Ph.D., Galveston, TX, "CURRENT MANAGEMENT OF RHEUMATOID ARTHRITIS"
9:00 a.m.	Thomas G. Skillman, M.D., Columbus, OH, "NEW CLASSIFICATIONS FOR DIABETES MELLITUS"
9:45 a.m.	COFFEE BREAK Exhibit Visitation
10:15 a.m.	Herbert G. Langford, M.D., Jackson, MS, "PRACTICAL SKILLS IN THE DIAGNOSIS AND TREATMENT OF HYPERTENSION"
11:00 a.m.	Arnold Sladen, M.D., Pittsburgh, "USES AND INTERPRETATION OF ARTERIAL BLOOD GASES AND ACID BASE"
11:45 a.m.	Questions and Answers
12:00 noon	LUNCHEON Town Hall Theater Chattanooga Choo Choo
SPEAKER:	Elaine B. Feldman, M.D., Augusta, GA
SUBJECT:	"NUTRITION AND LONGEVITY— DEBUNKING THE MYTHS AND FADS"
1:30 p.m.	R. Don Gambrell, Jr., M.D., Augusta, GA, "MANAGING THE MENOPAUSE: HORMONES IN THE ETIOLOGY AND PREVENTION OF ENDOMETRIAL AND BREAST CANCER"
2:15 p.m.	John G. Bartlett, M.D., Baltimore, "DIARRHEA—ANTIBIOTIC ASSOCIATED COLITIS"
3:00 p.m.	COFFEE BREAK Exhibit Visitation
3:30 p.m.	Howard J. Schaeffer, Ph.D., Research Triangle Park, NC, "THE BASIS OF SELECTIVE ACTION OF ACYCLOVIR ANTIVIRAL THERAPY"
4:15 p.m.	Thomas G. Skillman, M.D., Columbus, OH, "THE ENLARGED THYROID GLAND"
5:00 p.m.	Questions and Answers

Efficacy of a Checklist to Promote a Preventive Medicine Approach

BEVERLY J. WILLIAMS, M.D.

Introduction

Many who are concerned about health care delivery feel that in the ongoing primary care of large volumes of patients, the complexity and variety of complaint presentations frequently foster a tendency for "focal-local" care to patients by providers. This focal-local care, though appropriate in many situations, has all too often been practiced to the exclusion of any periodic comprehensive reevaluation. It has resulted too frequently in the delayed detection of certain disease processes at end-stage to which curative or remediable procedures might have been applied if they had been detected earlier. Examples of such diseases include end-organ hypertensive disease and late-stage breast cancer, glaucoma, colorectal cancer, and cervical cancer.

Since it is generally felt that failure to provide comprehensive ongoing care results more from the absence of a systemized effort organized for such provision rather than from planned negligence and unconcern, I undertook a study to evaluate the efficacy of a simple tool that could serve as a preventive care reminder.

The goal of the present study was to attempt to answer the question of whether a reminder checklist, made conspicuously available for the provider, could serve to significantly increase the

number of preventive health care parameters periodically checked by the provider. The number of parameters checked with the reminder list available was compared to the number checked when no reminder list was used.

Methods

Based on previous clinical experience and a literature search,¹⁻⁸ ten parameters thought most likely to provide a good yield were chosen for inclusion on a reminder checklist. A good yield parameter was defined as one for which early detection of an abnormality could lead to decreased disease-related morbidity and mortality. The parameters chosen by this criterion were breast examination, glaucoma, hematocrit, Pap smear, intermediate PPD (if not previously positive), prostate examination, random blood glucose, rectal examination, urinalysis and VDRL (Fig. 1). For nine of ten parameters, an annual check was recommended and for the breast examination, a semiannual check. The glaucoma and rectal examinations were recommended for all adults 40 years and older. The Pap smear was recommended for all adult women and prostate examination for adult men. All of the other tests were recommended for all adults of all ages and either sex.

Study and control groups of 500 members each were randomly chosen from the medicine outpatient clinic population at UTCHS-City of Memphis Hospital during the months October 1976 to February 1977. The reminder checklists were glued to the backs of the clinic cards of the study group members, who received a brief de-

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PREVENTIVE MEDICINE CHECKLIST/Williams

scription of the reminder sticker and were told to show their cards to their providers. A note describing the project and requesting the provider's participation was attached to the chart of each study group member. During each selection day, names and identifying unit numbers were obtained and kept for an equal number of study and control group members. A stamped copy of the reminder checklist was placed in the permanent clinic record of each study group member.

After four or five months a sample of control and study charts was chosen for review to compare the test performance for the two groups. About every fifth chart was chosen from alphabetical lists of the study and control group members. Because all of the charts were not retrievable, 71 study and 52 control charts were reviewed.

Results

The information obtained from the chart reviews of the study and control groups was initially analyzed to compare the overall number of appropriate tests done for the study group versus the control group. The next step involved a breakdown analysis by individual tests to determine which of the ten parameters were most likely to be examined for the study group versus the control group. The data were analyzed by the chi-square method. Difficult to analyze but of great concern was the comparison of abnormal

Expiration Date _____

Tests	78	79	80	81
Breast				
Glaucoma > 40				
Hct.				
Pap Smear				
P.P.D.				
Prostate > 40				
Random B.G.				
Rectal > 40				
U/A				
VDRL				

Figure 1. Preventive medicine reminder checklist used by City of Memphis Hospital—U.T. Medical Clinic.

TABLE 1

COMPARISON OF NUMBER OF PARTICIPANTS IN STUDY GROUP VS CONTROL GROUP MISSING TESTS

No. of Tests Missed	No. of Study Group Missing Tests	No. of Control Group Missing Tests
0	5	—
1	7	1
2	11	3
3	10	5
4	18	6
5	10	10
6	7	11
7	1	11
8	1	5
9	—	2

Statistical Comparison: S.E. Diff mean = .337; Critical ratio = 6.02.

Missed tests are significantly higher for the control group versus the study group ($P < .0000006$).

results and the number of follow-ups and treatments as a result of the abnormal tests, again comparing the study group with the control group.

The presence of the reminder checklist seemed to result in a greater number of parameters being checked for the study group versus the control group with a statistically strong significance ($P < .0000006$) (Table 1). The comparison of study and control groups by individual tests showed that in eight out of ten instances more control group members were missing each individual test than study group members. In Table 2, looking at the "Not Done" columns under the study and control groups, the control group missed breast examination, hematocrit, Pap smear, rectal examination, urinalysis and VDRL. These differences are significant at the P values shown.

A comparison of the number of abnormal results for each test in the study group versus the control group (Table 2) shows no consistent trend from test to test. This comparison cannot be accurately done because of the large percentages in the "Done-No Result" columns. There was evidence that a number of the study and control group members had had tests for which results could not be found in the charts. As the results could have been normal or abnormal, they would have significantly changed the percentage in the "Done-Normal" and "Done-Abnormal" columns.

TABLE 2
COMPARISON OF INDIVIDUAL TEST PERFORMANCE IN STUDY VS CONTROL GROUPS

Test	Study Group*				Control Group†				P Value
	Done— No Result	Done— Normal	Done— Abnormal	Not Done	Done— No Result	Done— Normal	Done— Abnormal	Not Done	
Breast	19.1%	30.1%	0%	44.7%	8.3%	8.3%	5.5%	77.8%	.0025
Glaucoma >40	1.9%	23.1%	3.8%	71.2%	0%	15.5%	2.2%	82.2%	.1494
Hematocrit	11.3%	56.3%	18.3%	14.1%	0%	48.1%	15.4%	36.5%	.0036
Pap smear	32.6%	15.0%	0%	52.1%	21.2%	6.1%	0%	72.7%	.0535
PPD	13.0%	5.8%	1.4%	79.7%	2.0%	0%	2.0%	96.1%	.0097
Prostate >40	22.2%	16.7%	5.5%	55.5%	7.1%	0%	14.3%	78.6%	.1624
Random BG	12.7%	54.9%	12.7%	19.7%	0%	51.0%	19.6%	29.4%	.1527
Rectal >40	15.1%	30.2%	5.7%	49.1%	6.5%	15.2%	0%	78.3%	.0027
Urinalysis	19.7%	35.2%	32.0%	12.7%	10.0%	24.0%	30.0%	36.0%	.0025
VDRL	14.5%	24.6%	7.2%	53.6%	2.0%	5.9%	2.0%	90.2%	.00002

*Average study sample size—57.

†Average control sample size—43.

Discussion

Two questions were posed as this study was undertaken. The first was whether or not some kind of reminder, perhaps in the form of a checklist, could significantly increase the number of preventive health parameters rechecked at appropriate intervals in the continuing care of a group of patients. This question was answered resoundingly in the affirmative, with significance at a P value of $< .0000006$. Impressed with the memory jogging effect of the checklist, I have now begun using the reminder checklist on the clinic cards of all of the patients in the medicine clinic at UTCHS-City of Memphis Hospital. In my private practice, where my patients do not carry their own identification cards, I am using a checklist on the back of the problem list in each patient's chart.

The second question was whether or not the periodic performance of preventive health parameters could result in earlier detection of abnormalities, earlier management, and thus decreased disease-related morbidity and prevention of mortality. This question has not so far been answered in this study. Part of the difficulty in answering this question has been the problem in determining the results of all of the tests done. Another issue is the time required to research the charts to determine follow-up and management of each abnormality. The next phase of this research will address this question more fully, for without a significantly positive answer to this second question, the affirmative answer to the first question becomes much less significant.

Data have been accumulated to show that periodic Pap smears, tonometric examination, VDRL, prostatic and rectal examinations, and probably breast examinations do result in detection of disease in stages early enough to allow for easy management and prevention of major complications. On the other hand, there is only subjective information and anecdotal clinical experience to support the need for periodic reassessment of a hematocrit, urinalysis, intermediate PPD, and random blood glucose, except when clinically indicated. These data should be forthcoming as phase IV of this study progresses.

Acknowledgments:

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The author wishes to acknowledge Dr. Iris Pearce for conceptual assistance and Ms. Betty Griffin and the medicine clinic nursing personnel and ward clerks for clerical assistance.

REFERENCES

1. American Joint Committee for Cancer Staging. Clinical staging system for carcinoma of the lung. *CA-A Cancer Journal for Clinicians* 24:87-95, 1974.
2. Leffall LD: Early diagnosis of colorectal cancer. *CA-A Cancer Journal for Clinicians* 24:152-159, 1974.
3. Murphy G: Prostate cancer. *CA-A Cancer Journal for Clinicians* 24:282-288, 1974.
4. Kaufman R, Rawls W: Herpes genitalis and its relationship to cervical cancer. *CA-A Cancer Journal for Clinicians* 24:258-265, 1974.
5. Barber HR, Graber E, Kwon TH: Ovarian cancer. *CA-A Cancer Journal for Clinicians* 24:339-350, 1974.
6. Dowdy A: Experience with combined screening for the detection of carcinoma of the cervix and carcinoma of the breast. *CA-A Cancer Journal for Clinicians* 21:158, 1971.
7. Haagensen CD: *Diseases of the Breast*, ed 2. Philadelphia, W.B. Saunders Co, 1971, p 99.
8. Allen JH: *May's Diseases of the Eye*, ed 24. Baltimore, Williams and Wilkins Co, 1968, pp 225-248.

Pelvic Actinomycosis Associated With Intrauterine Contraceptive Devices

JEFFREY M. BARRETT, M.D.; JAMES H. GROWDON, M.D.; and
JOHN E. VANHOODYDONK, M.D.

Introduction

Actinomyces israelii, the actinomyces pathogenic for man, is a Gram-positive non-sporeforming anaerobic bacillus which, although it is a bacterium, will characteristically form branching filaments. This organism is found most frequently in cervicofacial, thoracic, and abdominal infections, causing a chronic granulomatous process characterized by formation of multiple abscesses, draining sinuses, and dense fibrous tissue surrounded by granulation tissue.

A number of cases of pelvic actinomycosis have been reported, but until the past ten years almost all reported cases had been associated with bowel perforation, ruptured appendix, or distant infection with suspected hematogenous spread to the pelvis. In the past ten years, several cases of pelvic actinomycosis have been reported in women using the intrauterine device (IUD) for contraception. We present one such case.

Report of a Case

A 35-year-old white woman, gravida 2, para 2, came to her local hospital after being awakened by sudden suprapubic pain. She had felt well previously except for several months of low back pain and constipation. Her menstrual history had been normal. It was of note that she had had a Dalkon Shield IUD in her uterus for over seven years.

On presentation to the emergency room she was found to have an acute surgical abdomen. Abdominal x-rays revealed dilated loops of small and large bowel, and a Dalkon Shield in the midpelvic area. At exploratory laparotomy bilateral tubo-ovarian abscesses were found and a bilateral salpingo-oophorectomy was performed. Microscopic evaluation of the abscess wall revealed the "sulfur granules" characteristic of actinomycosis infection, but cultures of the abscess material revealed no growth on aerobic or anaerobic

culture. She was placed on broad spectrum antibiotics, but continued with low-grade fever and signs of peritonitis, and was therefore transferred to Vanderbilt University Hospital on the sixth postoperative day.

Examination revealed an ill-appearing woman in no acute distress. Pertinent findings included a distended, tympanic abdomen with hypoactive bowel sounds and diffuse rebound tenderness. The uterus was mobile, small, and slightly tender. There were no pelvic masses. Penrose drains were found exiting the lower abdomen and the posterior vaginal fornix.

After full evaluation, the decision was made against re-exploration. The Dalkon Shield was removed from the uterus, and antibiotic therapy with penicillin, gentamicin, and clindamycin was begun. The patient progressively recovered, and after 13 days of parenteral antibiotic therapy began a two-month course of oral tetracycline, 500 mg four times a day.

It is of note that all cultures were negative for actinomycosis. Fluorescent antibody staining could not be performed on the excised tissue because it had been fixed in formalin. The presumptive diagnosis of actinomycosis infection was made on the basis of the finding of sulfur granules, typical for actinomycosis, in the excised tissue.

Discussion

The IUD is felt to predispose to actinomycosis colonization by causing chronic trauma to the endometrium, resulting in a nidus of necrotic, devascularized tissue which acts as an excellent culture medium for this organism. The IUD string may also act as a wick for the organism to gain access to the endometrial cavity. Both metallic and plastic IUDs have been implicated.¹ Almost all severe primary infections have occurred in women who have had the IUD for over three years. It is of note that in most cases of pelvic actinomycosis there have also been other anaerobic bacteria in the abscess,² raising the question as to whether the actinomycosis is the major pathogen, or whether it simply causes changes in the pelvic tissue which predispose to infection by other organisms.

The symptoms associated with pelvic ac-

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tinomycosis include pelvic pain, purulent discharge, abnormal bleeding, and fever.^{3,4} Signs include pelvic tenderness and a pelvic mass. Pelvic actinomycosis has been reported to cause unilateral tubo-ovarian abscesses,⁵ but it is noteworthy that the signs and symptoms of pelvic actinomycosis are nonspecific, and that extensive infection can be present with minimal symptoms.⁶

An actinomycosis-associated pelvic infection is rarely suspected preoperatively or even intraoperatively. The presumptive diagnosis is usually made by finding sulfur granules, Gram-positive branching bacilli on Gram stain of tissue or exudate, and the typical "ray fungus" in sections of excised tissue. These may be widely scattered, requiring multiple sections before they are found. Cultures of the abscesses will often show no growth, but this may reflect the technique used for obtaining and processing the specimen and the difficulty in growing the organism. Careful anaerobic culture technique is imperative.

Treatment of an actinomycosis-associated pelvic abscess requires a combined surgical and medical approach. Surgery is necessary to drain the abscess and to remove the necrotic tissue in the area of the abscess, which usually requires hysterectomy and bilateral salpingo-oophorectomy. Medical treatment is with antibiotics. The initial antibiotic therapy should comprise broad spectrum antibiotics, to include coverage for the other anaerobic bacteria which are frequently associated with the actinomycosis infection. *Actinomyces* is sensitive to penicillin, tetracycline and clindamycin. After seven to ten days of parenteral antibiotic therapy, oral therapy can be instituted with penicillin or tetracycline. Because *Actinomyces* characteristically can continue in devascularized tissues for long periods after gross signs of infection disappear, long-term oral antibiotic therapy should be given. The dose of tetracycline currently recommended at our institution is 500 mg four times a day for two months. The dose of penicillin V is 500 mg four times a day for three to six months.

More recently, interest has been generated in the diagnosis of subclinical actinomycosis lower genital tract colonization by Pap smear. The findings on Pap smear include isolated aggregates of basophilic, filamentous, sometimes branching structures, with the filaments being slender and occasionally beaded. Pleomorphism is common. Sulfur granules are infrequently seen.⁷ This pre-

sumptive diagnosis of lower genital tract colonization appears to be quite common in IUD users, being seen in 59 of 300 Pap smears of IUD users in one series.⁸ These Pap smear findings have not been reported in the absence of IUD or pessary. If the Pap smear findings truly represent lower genital tract colonization with actinomycosis, it would appear, from the paucity of reported cases of actinomycosis-related pelvic abscess, that actinomycosis colonization of the lower genital tract rarely progresses to pelvic abscess. On the other hand, because a woman faces a life-threatening situation if she does develop a pelvic abscess, when the presumptive diagnosis of lower genital tract actinomycosis colonization is made, the IUD should be removed. If the patient is symptomatic (in the absence of pelvic abscess) IUD removal and antibiotic treatment are recommended. The antibiotic therapy should be high dose parenteral penicillin G until symptoms resolve, followed by four to six weeks of oral therapy using tetracycline or penicillin. Whether antibiotic therapy is necessary after IUD removal in an asymptomatic patient with actinomyces-like organisms on Pap smear is uncertain. At this time it is our recommendation that a ten-day course of oral antibiotic therapy be administered with either tetracycline 500 mg four times a day or penicillin V 500 mg four times a day.

If an asymptomatic patient desires to have the IUD replaced, repeat Pap smear and vigorous endometrial biopsy should be performed six to eight weeks after the previous IUD was removed. If these are negative, IUD replacement can be considered. In the symptomatic patient, there should be a minimal period of six months before replacement is considered, and then replacement should be done only after Pap smear and endometrial biopsy are negative. 

REFERENCES

1. Dische FE, Burt IM, Davidson NJ, et al: Tubo-ovarian actinomycosis associated with intrauterine contraceptive devices. *J Obstet Gynaecol Br Commonw* 81:724-729, 1974.
2. Hagar WD, Douglas B, Majmudar B, et al: Pelvic colonization with *Actinomyces* in women using intrauterine contraceptive devices. *Am J Obstet Gynecol* 135:680-684, 1979.
3. Schiffer MA, Elguezabal A, Sultana M, et al: Actinomycosis infections associated with intrauterine contraceptive devices. *Obstet Gynecol* 45:67-72, 1975.
4. Lomax CW, Harbert GM, Thornton WN: Actinomycosis of the female genital tract. *Obstet Gynecol* 48:341-346, 1976.
5. McCormick JF, Scorgie RD: Unilateral tubo-ovarian actinomycosis in the presence of an intrauterine device. *Am J Clin Path* 68:622-626, 1977.
6. Loth MF: Actinomycosis of the fallopian tube. *Am J Obstet Gynecol* 72:919-921, 1956.
7. Gupta PK, Hollander DH, Frost JK: *Actinomyces* in cervicovaginal smears: An association with IUD usage. *Acta Cytol* 20:295, 1976.
8. Jones MC, Buschmann BO, Dowling EA, et al: The prevalence of actinomyces-like organism found in cervicovaginal smears of 300 IUD wearers. *Acta Cytol* 23:282-286, 1979.

The Medical Malpractice Closed Claims Study

Conducted by the National Association of Insurance Commissioners

Executive Summary

M. PATRICIA SOWKA

ABSTRACT—The NAIC “Closed Claims Study,” just published in October, 1980, is a statistical analysis of over 71,000 malpractice insurance claims nationwide, the most extensive to date. The Executive Summary published here condenses 546 pages of data and findings into layman’s language, documenting trends in the frequency and cost of such claims for various medical specialties, procedures, and injuries.

More importantly, these findings can point to priorities for action by hospital medical staffs and by individual physicians to prevent avoidable maloccurrences and their frequent consequences: patient injury, litigation, and heavy costs to all concerned. According to the study, the impact of such incidents on patients range from irksome to utterly tragic, and the impact on the involved physician from vindictory to totally catastrophic. Measured in dollar indemnity, this impact is growing prodigiously, at a 30% annual rate.

In 1974-1975, various factors combined to precipitate an availability crisis in the medical malpractice insurance market. In June 1975, the NAIC adopted a new statistical program for medical malpractice and initiated the collection of

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comprehensive data on closed claims as a necessary first step in identifying and solving the elements of this problem. The NAIC data base includes information from the claim files of 128 insurers which had written medical malpractice premiums of \$1 million or more in any year since 1970, and consists of 71,782 claims closed between July 1975 and December 1978.

During the 3½ years covered by the study, indemnity paid on medical malpractice claims by all insurers reporting to the NAIC totaled \$876 million, of which 39% was paid in 1978, the final study year. (Indemnity: total dollar losses paid by insurance companies under the terms of their policies.) Between 1975 and 1978, the average award per injury increased 70% from \$26,565 to \$45,187, with inflation accounting for 28% of the increase. In each of the last two study years, average indemnity rose 30% over the previous year. If 1978 total medical malpractice losses are projected at this 30% growth rate, they approach \$1 billion annually in only a few years.

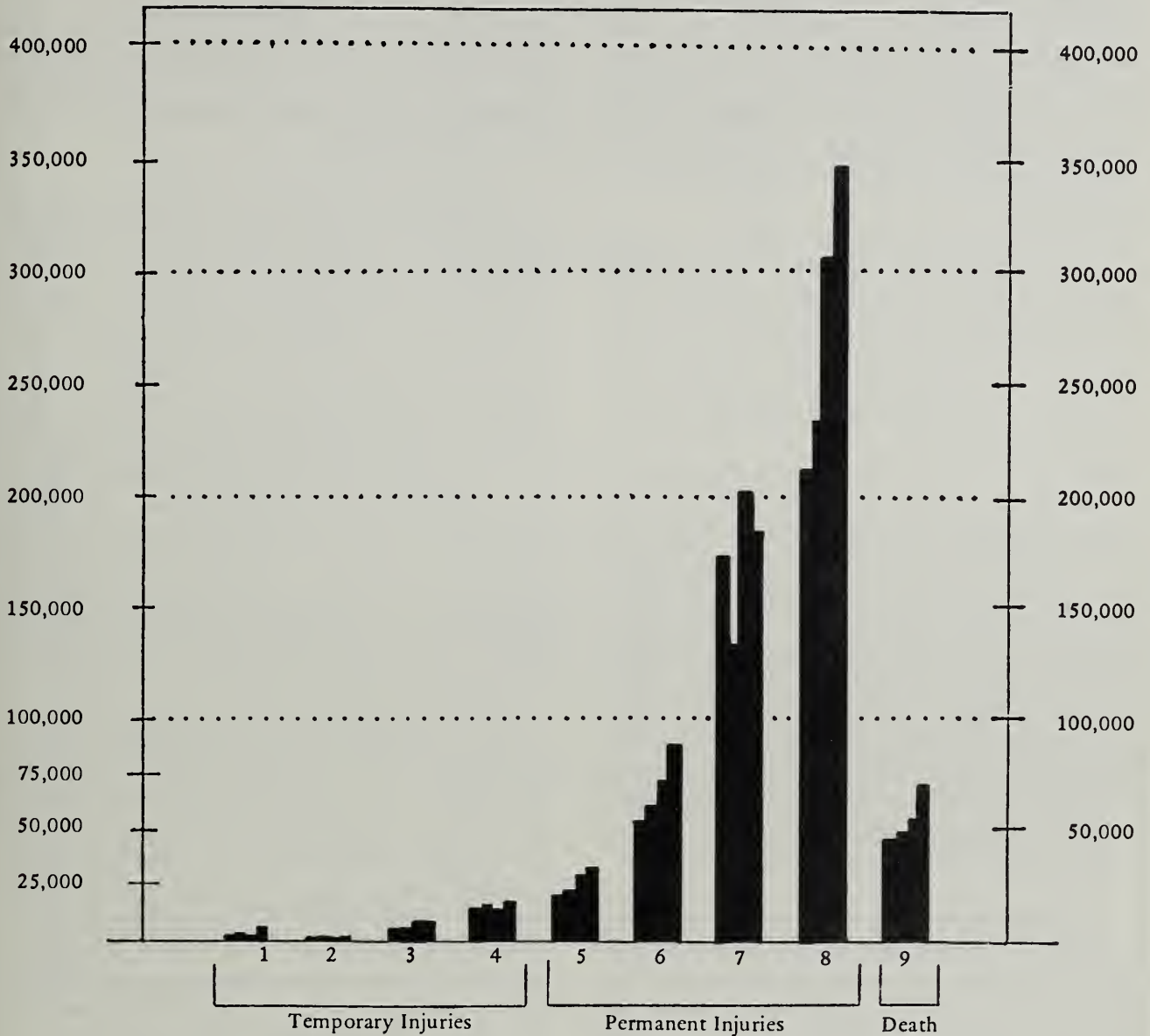
A major factor contributing to the growth of indemnity was the increase in large settlements or judgments. Indemnity payments of \$50,000 or more increased as a percentage of all reported incidents from 13% in 1975 to 20% in 1978. In 1975, only 5 awards of \$1 million or more were reported (1 per 1,000 paid claims); in 1978, 23 such awards were reported (3 per 1,000 paid claims).

The average defense cost and other allocated expense associated with each incident increased 73% over the study period and expense costs increased disproportionately on larger claims.

FIGURE 1

AVERAGE INDEMNITIES

ANNUAL AVERAGE INDEMNITY BY SEVERITY OF INJURY



	Severity of Injury Scale	Examples
Temporary	1) Emotional only	Fright, no physical damage.
	2) Insignificant	Lacerations, contusions, minor scars, rash. No delay.
	3) Minor	Infections, missed fracture, fall in hospital. Recovery delayed.
	4) Major	Burns, surgical material left, drug side effect, brain damage. Recovery delayed.
Permanent	5) Minor	Loss of fingers, loss or damage to organs. Includes nondisabling injuries.
	6) Significant	Deafness, loss of limb, loss of eye, loss of one kidney or lung.
	7) Major	Paraplegia, blindness, loss of two limbs, brain damage.
	8) Grave	Quadraplegia, severe brain damage, lifelong care or fatal prognosis.
	9) Death	

Each block on this graph represents an injury category defined on the claim reporting form. Within each block, the four steps represent average indemnities for each claim closure year, 1975 through 1978.

The percentage of claims closed without any reported expense decreased.

Analysis by severity of injuries resulting in indemnity payments showed that temporary injuries accounted for 54% of all paid claims and 15% of total indemnity for all study years. Permanent injuries accounted for 26% of all claims and 57% of indemnity, and deaths accounted for 16% of claims and 27% of indemnity. The number of claims and dollars paid for emotional injuries and solely legal issues was relatively insignificant.

Permanent injuries, particularly grave injuries—those involving cardiac arrest, quadriplegia or severe brain damage and often resulting from anesthesia accidents, patient monitoring problems or birth injuries—showed the greatest increase in average indemnities between 1975 and 1978. The average indemnity paid for grave injuries increased from \$213,777 in 1975 to \$349,203 in 1978, a rise of 63% (Fig. 1). Although grave injuries represented only 2% of all injuries resulting in claim payments in 1975 and 3% in 1978, claims for these injuries accounted for 16% of total indemnity in 1975 and 22% of total indemnity in 1978. Injuries to infants comprised 17% of all cases where indemnity was paid for grave injuries in 1975 and 32% in 1978. Injuries to infants also accounted for 13% of all cases where indemnity was paid for permanent major injuries (the second most severe injury category) in 1975 and 25% in 1978. In this same period, temporary injuries decreased as percentages of yearly incident and indemnity totals.

Hospitals were reported as the site of injury in 78% of all incidents which resulted in paid claims. However, when classified by type of defendant, 60% of all paid claims involved doctors and 31% hospitals. This indicates that many claims arose from the activities of physicians in hospitals. Indemnity payments for physician defendants amounted to 71% of total reported indemnity, while payments for hospital defendants amounted to 25%. Payments arising from incidents involving other health care professionals and institutions accounted for only 4% of total indemnity. Average indemnity paid for hospital defendants rose 59% between 1976 and 1977, but decreased 5% between 1977 and 1978, while average indemnity paid for physician defendants increased 37% from 1977 to 1978.

The claim reports presented many variations in the medical circumstances surrounding the in-

juries for which indemnity was sought. However, when the core data were summarized, they showed that 35% of all reported paid claims related to allegations of improperly performed procedures, 27% were associated with diagnostic errors, 10% with drug injuries, 10% with falls, and 15% with other events or combinations of causes. Only 3% of claims originated from anesthesia injuries, but these injuries were associated with 11% of all indemnity.

The general categories of procedures most often reported as associated with malpractice claims, and accounting collectively for almost one half of all incidents and indemnity, were (1) examinations, including emergency room examinations and other medical examinations, (2) operations on the female genital system, in particular hysterectomies, tubal ligations, and D&Cs, (3) treatments with drugs, (4) diagnostic and therapeutic procedures, which include physical therapy, cast immobilizations and blood transfusions, and (5) operations on the musculoskeletal system, in particular reductions of fractures and excisions of intervertebral discs. In Figure 2, specific procedures (as contrasted with general categories of procedures) are ranked by association with paid claims.

By procedure group, the highest average indemnity payments arose from anesthesia procedures (\$96,822) in particular general anesthesia (\$100,573). Although anesthesia-related claims accounted for only 3% of all paid incidents by count, they accounted for 11% of total indemnity payments, and average indemnity on these cases increased 58% from 1977 to 1978. Approximately one half of the 640 cardiac arrests reported in connection with paid claims were related to anesthesia. Cardiac arrests accounted for one third of all anesthesia-related injuries.

Operations on the nervous system resulted in the second most costly claims (\$72,336). Within this group, operations on the spinal cord were most frequently reported and most costly, with an average indemnity of almost \$105,000. Average indemnity paid for injuries from operations on the nervous system increased 168% between 1975 and 1978.

Obstetrical procedures produced the third highest average indemnity by category (\$72,279). Claims reporting low forceps deliveries, though not frequent, usually involved brain-damaged infants, and the resulting indemnities averaged in excess of \$100,000. Average

FIGURE 2

MOST FREQUENTLY REPORTED PROCEDURES						
	Most Frequently Reported Procedures	HICDA Code Range	Incidents		Average Indemnity	Average Severity of Injury
			Total	Paid		
1	Treatment with Drugs	D60.0-D79.9	5687	2786	36,827	5.0
2	Physical Examination	Y00.0-Y00.6, Y00.8-Y01.9	3386	1397	43,616	5.7
3.	Emergency Room Examinations	Y00.7	2394	1002	32,333	5.5
4.	Other X-Ray Procedures	R99.0	2062	971	19,703	4.2
5	Incision, Excision and Suture of Skin, Including Skin Grafts	88.0, 88.3-88.7, 88.9, 89.0 89.2-89.3, 90.2	2040	964	13,127	3.7
6	Hysterectomy, Abdominal (Total and Subtotal) and Vaginal	68.2-68.4	2055	960	36,036	4.7
7	Closed and Open Reductions of Fractures and Dislocations With or Without Fixation Device, Excluding Facial Fractures	79.0-79.8	2166	828	37,773	4.5
8	Operations on Teeth and Supporting Structures	23.0-23.9, 24.0-24.9	1480	794	7,555	3.3
9	Inhalation and Intravenous Anesthesia Procedures	A168.0-A168.9, A268.0-A268.9	1281	716	100,573	5.7
10	Sterilizations—Male and Female	63.5, 63.6, 66.3, 66.4	1381	647	14,954	3.1
11	Dilation and Curettage and Aspiration Curettage of Uterus	69.0, 69.1	1168	564	26,870	4.0
12	All Types of Monitoring	H93.0-H93.2, H93.6-H93.9	1030	478	101,347	6.9
13	Excision of Intervertebral Disc	80.5	929	400	72,921	5.4
14	Obstetrical Procedures Excluding Caesarean Sections	72.0-72.8, 73.0-73.9, 75.0-75.9	866	380	69,755	4.9
15	Physical Therapy and Rehabilitation	97.6, 97.7	717	358	11,940	3.7
16	Operations on the Biliary Tract Including Exploratory Laparotomy	51.0-51.9	690	347	61,716	5.0
17	Incision, Excision of Abdominal Wall and Peritoneum Including Exploratory Laparotomy	54.0-54.4	708	300	38,889	5.2
18	All types of Herniorrhaphy	53.0-53.9	671	257	33,003	4.8
19	Appendectomy	47.0	605	244	54,379	5.4
20	All types of Caesarean Sections	74.0-74.9	525	236	76,343	5.8
21	Operations on Tonsils and Adenoids	28.0-28.9	338	190	35,102	5.1
22	Insertion of Intra-uterine Device	69.2	444	177	21,191	3.6

FIGURE 3

EXPERIENCE BY PHYSICIAN SPECIALTY				
<u>ISO Classification</u>	<u>Specialty</u>	<u>Percent of Total Physicians Indemnity</u>	<u>Average Indemnity</u>	<u>Number of Claims</u>
80112	PHYSICIAN, MINOR SURGERY	16	\$21,527	3234
80111	PHYSICIAN, NO SURGERY	13	21,206	2501
80143	GENERAL SURGERY	13	25,449	2245
80153	SURGERY OB/GYN	13	27,429	2011
80154	ORTHOPEDIC SURGERY	9	20,526	1343
80151	ANESTHESIOLOGY	9	44,208	839
80113	GENERAL PRACTICE WITH SURGERY	5	18,103	1141
80152	NEUROSURGERY	5	56,065	347

indemnity on obstetrical procedures as a category increased 47% between 1977 and 1978.

Operations on the cardiovascular and respiratory systems, and special hospital procedures also resulted in costly claims. Monitoring procedures, included in the latter group, resulted in claims with an average indemnity of \$101,000.

By specialty, as classified for insurance purposes, the Physician Minor Surgery class accounted for the most paid claims and largest percentage of indemnity paid for physician defendants followed by Physician No Surgery, General Surgery, Surgery Ob/Gyn, Orthopedic Surgery, Anesthesiology, General Practice with Surgery, and Neurosurgery. Collectively, these groups accounted for 83% of all indemnity paid for claims against physicians. In terms of average claim size, Neurosurgeons and Anesthesiologists had the most expensive claims, \$56,065 and \$44,208 (Fig. 3).

Over the study period, analysis of time elements in the claims process showed an increasing time taken to settle or dispose of claims. Claims closed with payment in 1975 involved incidents which had occurred, on average, 37 months earlier. Claims closed with payment in 1978 involved incidents which had occurred 46 months earlier. Claims closed without payment

in 1978 averaged 38 months to reach closure status, an increase of 12 months over 1975. Since this study was terminated in December 1978, and the incidents for which claims were closed in 1978 had occurred, on the average, in 1974-1975 (38-46 months earlier), it is difficult to measure the effect of the legislation passed in 1975 to shorten statutes of limitations.

Claim dispositions reported as resulting from court actions also increased over the course of this study. In 1975, only 7% of all medical malpractice claims were disposed of in courts of law. That percentage increased each year through 1978 when 18% of all claims were resolved by litigation. In addition, almost half of all reported settlements were reached after a suit had been filed or a trial was under way. The percentage of claims against physicians resolved by the court process was higher than the percentage of claims against hospitals. The success of the defendant in court also increased over the course of the study. Defendants won eight of each ten court cases reported in 1975 and nine of each ten reported in 1978. The lengthened claim disposition times, as noted in the paragraph above, made it difficult to evaluate the impact of legislation (which established review panels in many states during 1975) on the number of cases directed to the courts.

Specific Procedure Analyses

The following analyses of specific procedures were produced from the NAIC data, at the request of the Council of Medical Specialty Societies. The analyses enumerate specific injuries associated with representative particular procedures of the various specialties.

Orthopedic Surgeons Pediatrics

Analysis for 79.0 — Closed Reduction Without Internal Fixation With Application of Cast

Total Cases — 451

<i>Injuries</i>	<i>Cases</i>
1. Late Effect of Fractures (Malunion, Nonunion)	247
2. Acquired Musculoskeletal Deformities	86
3. Impairment of Neuromusculoskeletal Function	70
4. Misdiagnosis	56
5. Gangrene	28
6. Below-Knee Amputations	22
7. Scars	19
8. Above-Knee Amputations	15
9. Volkmann's Ischemic Contractures	14
10. Nerve Injuries	14
11. Osteomyelitis	12
12. Amputations Other Than Leg	11
13. Anesthetic Injuries	11
14. Posttraumatic Wound Infection	9
15. Peripheral Neuropathy — Any Nerve	8
16. Postoperative Wound Infections	8
17. Artery Injuries	8
18. Osteoporosis and Bone Atrophy	5
19. Decubitus Ulcers	5
20. Accidental Fall During Hospital Stay	5

Other injuries with 1 or 2 occurrences:

Venous (Peripheral) Insufficiency, Aseptic Necrosis of Bone, Phlebitis and Thrombophlebitis, Bacterial Diseases, Motor Neuron Disease, Embolisms, Contractures and Deformities, Injury of Tendons, Resulting Dislocation, Ankylosis of Joint, Shock, Acute Arthritis, Postoperative Hemorrhage, Musculoskeletal Injuries of Knee and Leg, Hepatitis, Internal Derangement of Joint, Pulmonary Complications, Abnormal Vascular Signs, Limitation of Motion, Difficulty in Walking, Pain in Limb, Synovitis of Joint, Paresthesia, and Open Wounds.

Psychiatry

Analysis for D70.0, D70.1 and D70.9 — Administration of Psychotropic Drugs

Total Cases — 204

<i>Injuries</i>	<i>Cases</i>
1. Adverse Effect, Unspecified	72
2. Adverse Effect, Overdose	44
3. Adverse Effect, Improper Route of Administration	32

4. Adverse Effect, Allergic Reaction	25
5. Nerve Injuries	18
6. Misdiagnosis	16
7. Adverse Drug, Wrong Drug Chosen by Physician	14
8. Adverse Effect, Adverse Interaction with Other Drug	11
9. Cardiac Arrest	9
10. Brain Damage	8
11. Superficial Injuries to Skin and Subcutaneous Tissue	8
12. Thrombophlebitis	8
13. Adverse Effect, Improper Route of Administration	7
14. Suicide	7
15. Accidental Falls	7
16. Acquired Musculoskeletal Deformities	7
17. Diseases of Liver	5

Other injuries with 1, 2, or 3 occurrences:

Drug Given to Wrong Patient, Prescription Error, CVA with Paralysis, Paranoid States, Dependence on Tranquilizers, Myocardial Infarction, Scars, Embolism, Rash, Paralysis, Hemorrhage, Aspiration Pneumonia, Disturbance of Speech, Bradycardia, Respiratory Arrest, Encephalitis, Kidney Failure, Peripheral Neuropathy, Subdural Hemorrhage, Hypotension, Fractures After Falls, Prenatal Complications, Artery Injuries, Congestion of Lung, Indigestion, Cellulitis, Disturbance of Skin Sensation, Tetanus, Disturbance of Coordination, and Coma.

Surgery

Analysis for 51.1 — Cholecystectomy

Total Cases — 327

<i>Injuries</i>	<i>Cases</i>
1. Foreign Body Left in Operative Wound	92
2. Puncture or Laceration of Intra-Abdominal Organs	59
3. Misdiagnosis	53
4. Postoperative Wound Infection	24
5. Anesthetic Injuries	18
6. Postoperative Hemorrhage of Hematomas	18
7. Peritonitis or Adhesions	17
8. Other Types of Infection Such as Bacteremia and Septicemia	16
9. Nerve Injuries	15
10. Postoperative Fistulas	12
11. Disruption of Operative Wound	8
12. Burns	8
13. Obstruction of Bile Duct	8
14. Complications for Nonabsorbable Surgical Material	8
15. Artery Injuries	6

16. Renal Failure	6
17. Embolism	6
18. Shock	5
19. Postcholecystectomy Syndrome	5
20. Pulmonary Collapse and Other Lung Complications	5
21. Jaundice	5
22. Puncture or Laceration of GI Organs	4
23. Puncture or Laceration of Other Organs	4
24. Puncture or Laceration of Pelvic Organs	3
25. Transfusion Reactions	3
26. Serum Hepatitis	3
27. Ventral Hernia	3

Other injuries with 1 or 2 occurrences:

Complications of Internal Anastomosis, Acute Cholangitis, Gangrene, Hepatic Failure, Necrosis of Liver, Scars, Congestive Heart Failure, Gangrene of Intestines, Congestion of Kidney, Intestinal Obstruction, Fever of Unknown Origin, Upper Respiratory Tract Infections, Abscess of Trunk and Upper Arm, Fracture of Rib, Myocardial Infarction, Colostomy Status, Malaise and Fatigue, Anemia, Hiatal Hernia, and Tracheostomy Status.

Allergy

Analysis for Y82.0 —Desensitization to Allergies

Total Cases — 11

<i>Injuries</i>	<i>Cases</i>
1. Anaphylactic Shock	6
2. Patients Expiring	5
1 Cardiac Arrest	
1 Allergic Reaction to Medication and Shock	
1 Other Serum Reaction	
1 Anaphylactic Shock	
1 Unknown	
3. Other Serum Reaction	3

Otolaryngology

Plastic and Reconstructive Surgery

Analysis for 21.8 —Repair and Plastic Operations on Nose

Total Cases — 89

<i>Injuries</i>	<i>Cases</i>
1. Abscess, Necrosis, Ulcer (Septum) of Nose	26
2. Cicatrix or Scar	15
3. Deviated Nasal Septum	12
4. Superficial Injury of Face, Neck or Scalp	8
5. Postoperative Wound Infection	6
6. Acquired Musculoskeletal Deformity of Nose	5
7. Misdiagnosis (Diabetes Complication, Malignant Neoplasm of Nose)	4
8. Other Dermatitis	4
9. Foreign Body Left in Operative Wound	4
10. Postoperative Hemorrhage	3
11. Dyspnea	3

Other injuries with 1 or 2 occurrences:

Other Hypertrophic and Atrophic Conditions of Skin, Disturbances of Skin Sensations, Fracture of Nasal Bones, Neurosis and Adjustment Reactions, and Vertigo.

Internal Medicine

Analysis for 94.7 —Blood Transfusions

Total Cases — 218

<i>Injuries</i>	<i>Cases</i>
1. Serum Hepatitis	129
2. Transfusion Reaction (Incompatibility)	82
3. Infection or Sepsis Due to Transfusion	25
4. Misdiagnosis	13
5. Acute or Chronic Kidney Failure	10
6. Brain Damage	4
7. Mental Retardation	4
8. Cardiac Arrest	4
9. Shock	4
10. Hemorrhage	4
11. Pulmonary Emboli	3
12. Congestive Heart Failure	3
13. Complications from Intravenous Catheter Device	3
14. RH Iso-Immunization	3

Other injuries with 1 or 2 occurrences:

Artery Injuries, Disseminated Intravascular Coagulopathy, Gastroenteritis, Anemia, Other Renal Disease, Nerve Injuries, Disturbances of Skin Sensation, Asphyxia, Superficial Injuries to Skin, Toxic Hepatitis, Dyspnea, Injury to Blood Vessel of Abdomen, Partial Deafness of Infant, Mother with Kidney Failure Having Stillbirth, Muscle Cramps, Congestion of Lung, Anesthesia Injuries, Disorders of Heart Rhythm, Cerebrovascular Accidents, Amputation Arm Above Elbow, Infants Having RH Iso-Immunization, Impairment of Neuromusculoskeletal Function of Upper Arm, Fever of Unknown Origin, Hypovolemic Shock, Convulsions, and Rash.

Obstetrics and Gynecology

Family Practice

Analysis for 68.2 and 68.3 —Total and Subtotal Abdominal Hysterectomy

Total Cases — 746

<i>Injuries</i>	<i>Cases</i>
1. Puncture or Laceration of Pelvic Organs	163
2. Postoperative Fistulas	129
3. Foreign Body Left in Operative Wound	90
4. Misdiagnosis	71
5. Postoperative Wound Infections	55
6. Anesthetic Injuries	54
7. Peritonitis	37
8. Puncture or Laceration of GI Tract	37
9. Complications from Nonabsorbable Surgical Material	32
10. Nerve Injuries	31
11. Postoperative Hemorrhage or Hematomas	26
12. Gastrointestinal Disturbances	25
13. Bacterial Disease	19
14. Obstruction of Ureter	15
15. Absence of Other Organs as Result of Complications	15
16. Artery Injuries	14
17. Undesired Sterility	13
18. Disruption of Operative Wound	11

19. Pulmonary Embolism	11
20. Shock	10
21. Burns	10
22. Urinary Incontinence	9
23. Pelvic Inflammatory Disease	8
24. Kidney Failure	6
25. Congestive Heart Failure	6
26. Pneumonia	5
27. Thrombophlebitis	5
28. End-Result Colostomy	5

Other injuries with 1 or 2 occurrences:

Gangrene, Paralysis, End-Result Amputation, Embolism in Extremities, Renal Disease, Urinary Tract Infection, Cystitis, Stricture of Urethra, Disease of Liver, Tracheostomy with Partial Absence of Colon, Injury to Kidney, Acute Pulmonary Edema, and Hypostatic Pneumonia.

Emergency Medicine Dermatology

Analysis for 89.0 —Suture of Skin and Subcutaneous Tissue

Total Cases — 400

<i>Injuries</i>	<i>Cases</i>
1. Misdiagnosis of Complicated (Foreign Body or Primary Infection) Open Wound	122
2. Late Effect of an Open Wound	99
3. Impairment of Neuromusculoskeletal Function	66
4. Misdiagnosis of a Muscle or Tendon Injury	53
5. Foreign Body Granuloma of Skin	52
6. Late Effect of a Muscle or Tendon Injury	35
7. Postoperative Wound Infection	30
8. Posttraumatic Wound Infection	26
9. Scars	23
10. Complicated Open Wound — Present After Surgery	22
11. Misdiagnosis of Open Wound	19
12. Nerve Injuries	16
13. Peripheral Neuropathy	14
14. Misdiagnosis of Fracture	12
15. Gangrene	12
16. Misdiagnosis, Other Than Above	11
17. Amputation of Finger	9
18. Acquired Musculoskeletal Deformities	7
19. Amputations of Leg	6
20. Gas Gangrene	5
21. Keloid Scars	5
22. Pain in Limb	4
23. Cellulitis and Abscess	4

Other injuries with 1, 2, or 3 occurrences:

Misdiagnosis of Open Intracranial Wound, Brain Damage, Postoperative Fistula, Amputation of Both Legs, Amputation of Arm, Ankylosis of Joints, Infective Myositis, Amputation of Thumb, Tetanus, Lacerations of Tendon, Anesthetic Injuries, Laceration of Nerve, Late Effect of Nerve Injuries, Late Effect of Fractures, Contracture of Tendon, Superficial Injuries, Muscle Cramp, Disturbance of Sensation, Osteomyelitis, Artery Injuries, Local Infections of Skin, Thrombophlebitis, Synovitis or Bursitis, and Accidental Falls.

Colon and Rectal Surgery

Analysis for 45.5 —Subtotal Resection of Large Intestine

Total Cases — 59

<i>Injuries</i>	<i>Cases</i>
1. Foreign Body Left in Operative Wound	22
2. Postoperative Fistula	12
3. Misdiagnosis	11
4. Puncture or Laceration of Gastrointestinal Tract	8
5. Peritonitis	6
6. Postoperative Wound Infection	4
7. Colostomy Status	4
8. Renal Failure	3
9. Complications of Internal Anastomosis	3
10. Anesthetic Injuries	3

Other injuries with 1 or 2 occurrences:

Spontaneous Pneumothorax, Postoperative Shock, Pulmonary Emboli, Septicemia, Intestinal Obstruction, Gangrene of Intestine, Obstruction of Ureter, Other Renal Disease, Ileostomy Status, Disruption of Operative Wound, Ventral Hernias, Nerve Injuries, Serum Hepatitis, Pelvic Inflammatory Disease, Injury to Kidney, Metastases Developed, Fall During Hospital Stay Causing Fracture of Facial Bones, Dyspareunia, Gastrointestinal Bleeding, and Adverse Effects of Drugs.

Neurology

Analysis for 98.0 —Encephalography and Ventriculography

Total Cases — 5

<i>Injuries</i>	<i>Cases</i>
1. Infant delivered vaginally apparently should have had a Cesarean section. The infant was born with brain damage and hydrocephalus.	
2. The encephalography was misinterpreted so a malignant neoplasm was misdiagnosed.	
3. The encephalography was misinterpreted so an intracranial injury was misdiagnosed resulting in unspecified blindness.	
4. The patient has an abnormal encephalography and the patient had hemiplegia.	
5. Patient developed a disease of the optic nerve.	

Neurological Surgery

Analysis for 80.5 —Excision of Intervertebral Disc

Total Cases — 400

<i>Injuries</i>	<i>Cases</i>
1. Postlaminectomy Syndrome	51
2. Accidental Puncture or Laceration	49
3. Foreign Body Left in Operative Site	49
4. Misdiagnosis	48
5. Nerve Injuries	47
6. Need for Further or Repeat Surgery	34
7. Acquired Musculoskeletal Deformities	31
8. Impairment of Neuromusculoskeletal Function	26
9. Postoperative Wound Infection	25

10. Anesthetic Injuries	24
11. Artery Injuries	23
12. Spinal Cord Lesion without Evidence of Vertebral Injury	19
13. Quadriplegia	17
14. Musculoskeletal Injuries of Back	17
15. Paraplegia	16
16. Meningitis	15
17. Diseases of Spinal and Peripheral Nerves	12
18. Bacterial Infections	12
19. Other and Unspecified Paralysis	9
20. Postoperative Hemorrhage or Hematoma	8
21. Burns	7
22. Impotence	7
23. Hemiplegia	6
24. Gas Embolism	6
25. Contusions	5
26. Postoperative Fistulas	5
27. Urinary Incontinence	5
28. Monoplegia	5

Other injuries with 4 or less occurrences:

Injury to Gastrointestinal Tract, Complications of Other Grafting Procedures, Dislocation, Instability of Joint, Dysuria, Pulmonary Emboli, Shock, Fracture of Vertebral Column, Injury to Intrathoracic Organ, Intraspinal Abscess, Incontinence of Feces, Cicatrix or Scar, Injury to Pelvic Organs, Osteomyelitis, Thrombophlebitis, Spontaneous Pneumothorax, Complications from Nonabsorbable Materials, Disturbances of Skin Sensation, Neurogenic Bladder Dysfunction, Cystitis, Continuing Back Pain, and Accidental Falls During Hospital Stay.

Ophthalmology

Analysis for 15.4 —Intracapsular Extraction of Lens

Total Cases — 90

<i>Injuries</i>	<i>Cases</i>
1. Blindness, One Eye, Not Specifically Defined	36
2. Blindness, One Eye, Specifically Defined	19
3. Postoperative Wound Infection	16
4. Absence of Eye	9
5. Postoperative Hemorrhage	7
6. Contusion of Eye or Orbit	6
7. Detachment of Retina	5
8. Misdiagnosis (Benign Neoplasm of Eye, Glaucomas)	5
9. Blindness, Unspecified	3
10. Disturbance of Vision, Not Elsewhere Classified	3
11. Accidental Puncture or Laceration	3
12. Anesthetic Injuries	3
13. Open Wound of Eye or Orbit	3

Other injuries with 1 or 2 occurrences:

Other and Unspecified Inflammation of Uveal Tract, Vascular Lesions of Retina, Other Inflammatory Diseases of Eye, Infections and Bacterial Disease, Burns, Need To Do Further Surgery, Other Diseases of Iris, Foreign Body in Eye or Adnexa, Keratitis, Secondary Membrane or Sommering's Ring, Vesicles or Bullae, Adverse Effect of Other Electrolytic, Caloric and Water Balance Agents, Overdose of Anticoagulants, Malfunction of a Prosthetic Device, Uveitis (Sympathetic), Adverse Effect from Antibiotic Diseases of Eyelid, Blurred Vision, and Conjunctivitis.

Anesthesiology

Analysis for A168.1 —Inhalation of Anesthetic Gas

Total Cases — 541

<i>Injuries</i>	<i>Cases</i>
1. Cardiac Arrest and Brain Damage	200
2. Broken Teeth	200
3. Injury to Intrathoracic Organs (Excluding Heart and Lung)	25
4. Toxic Hepatitis	25
5. Superficial Injuries of Skin	11
6. Aspiration Pneumonia with Foreign Body in Bronchus or Lung	10
7. Asphyxia	9
8. Postoperative Wound Infection	8
9. Myocardial Infarction	8
10. Respiratory Arrest	7
11. Serum Hepatitis	6
12. Cerebral Paralysis	6
13. Nerve Injuries	5
14. Other Diseases of Lung	5
15. Kidney Failure	5

Other injuries with 4 or less occurrences:

Foreign Body in Pharynx and Larynx, Scars or Cicatrix, Spontaneous Pneumothorax, Injury to GI Organ, CVA with Paralysis, Cerebral Palsy, Mental Retardation, etc., after Mother's C-Sections, Injury of Lung, Fever of Unknown Origin, Blindness, Hepatic Failure, Burns, Abscess of Lung, Comas, Hemorrhage, Pulmonary Emboli, and Shock.

Urology

Analysis for 60.2 —Prostectomy, Transurethral

Total Cases — 94

<i>Injuries</i>	<i>Cases</i>
1. Puncture or Laceration of Pelvic Organs	23
2. Burns	15
3. Urinary Incontinence	13
4. Misdiagnosis	6
5. Anesthetic Injuries	6
6. Foreign Body Left in Operative Site	5
7. Other Symptoms of Male Genital Organs	4
8. Impotence	4
9. Puncture or Laceration of GI Tract	3
10. Sterility	3
11. Postoperative Hemorrhage	3
12. Neuroses	3

Other injuries with 1 or 2 occurrences:

Renal Failure, Bacteremia, Peritonitis, Enuresis, Misdiagnosis of a Cardiac Condition, Surgery Led to MI, Colostomy Status, Fistulas, Other Diseases of Male Genital Organs, Abnormal Posture, Postoperative Wound Infection, Orchitis and Epididymitis, Nerve Injuries, Erythema Multiforme, Retention of Urine, Stricture of Urethra, Serum Hepatitis, Urinary Tract Infection, Hematuria, Misdiagnosis of Circulatory Disease After Surgery Led to Amputation of Leg, Above Knee, Unspecified Mental Disorder Associated with Drug and Chemicals, Gangrene Led to Amputation of Leg, Above Knee, Complications of Nonabsorbable Surgical Material, Fall During Hospital Stay, and Other Diseases of Urethra.

Thoracic Surgery

Analysis for 31.1 —Temporary Tracheostomy

Total Cases — 52

<i>Injuries</i>	<i>Cases</i>
1. Respiratory Arrest	12
2. Misdiagnosis	12
3. Cardiac Arrest	11
4. Stomal Complication	4
5. Brain Damage	4
6. Respiratory Insufficiency	3
7. Artery Injuries	3
8. Postoperative Hemorrhage	3
9. Puncture or Laceration of Intrathoracic Organs	3
10. Cicatrix or Scars	3

Other injuries with 1 or 2 occurrences:

Cerebral Palsy, Hemiplegia, Postoperative Fistula, Influenza, Edema of Larynx, Asphyxia, Pulmonary Collapse, Enterostomy Complication, Anesthetic Injuries, Bradycardia, Burns, Disorders of Voice, Adverse Effect of Sympathomimetics, Congestive Heart Failure, Other Diseases of Larynx, Injury to Spleen, Asphyxiation and Strangulation, Stammering, Stuttering and Other Speech Disturbances, Musculoskeletal Injury of Ribs and Sternum, and Diseases of Bronchus and Trachea.

Radiology Nuclear Medicine

Analysis for 97.0 and 97.1 —Beam Radiation Therapy and Radium or Radioisotope Therapy

Total Cases — 115

<i>Injuries</i>	<i>Cases</i>
1. Adverse Effects of External Radiation	91
2. Burns	33
3. Adverse Effect of Internal Radiotherapy	12
4. Sterility	9
5. Misdiagnosis	8
6. Paralysis	7
7. Accidental Falls	7
8. Carcinoma of Thyroid	5
9. Myelitis	4
10. Gangrene	4
11. Resulting Fractures from Falls	4

Other injuries with 1, 2, or 3 occurrences:

Colostomy Status, Artificial Opening of Urinary Tract, Impairment of Hearing, Injury of GI Tract, Rectovaginal Fistula, Abdominal Pain, Blindness, Tracheostomy Status, Osteomyelitis, Chronic Fibrosis of Lung, Toxic Nephropathy, Pelvic Inflammatory Disease, Infective and Parasitic Disease, Decubitus Ulcer, Pneumonia, Prenatal Complications, Disease of Esophagus, Disturbance of Speech, Hemoptysis, Encephalomalacia, Impotence, Syncope, Atrophy of Testicle, Urinary Incontinence, Injury to Pelvic Organs, Gastroenteritis, Proctitis, Foreign Body Left at Radiation Site, Keloid Scar, Disruption of Ossicular Chain, Musculoskeletal Deformities, Nerve Injuries, Eczema Due to Radiation, and Scars.

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Psychogenic Pain Is For Real

JOSEPH G. BURD, M.D.

There is no way to practice medicine without having an approach to the management of psychogenic pain. It must obviously first be recognized as a cry for help. Square one is acceptance of the fact that the nervous patient is uncomfortable. Square two is acceptance of psychogenic pain as real to the sufferer. You cannot ignore squares one and two when the patient develops a "frozen" shoulder, causalgia, or reflex sympathetic dystrophy. This is square three: an obvious, painful, disabling entity.

Traumatized nerve fibers in skin, muscle and periosteum can be seen and touched. On the other hand, the migraine sufferer has little to present in way of objective findings. He is victimized by the great, mysterious autonomic nervous system.

It is somewhat of an embarrassment to realize that little knowledge has been added to the work done years ago by Weir Mitchell and Leriche. Our knowledge of the autonomic nervous system is strictly empirical. Certain drugs act on the sympathetic and others on the parasympathetic nervous system. The actions are documented, and this is the basis of our knowledge of an important mysterious component of our body.

All of this must come home to the doctor who looks at the shiny, swollen, tender hand and wrist. The patient with this syndrome hurts. X-ray studies show demineralized bone, compatible with the diagnosis. You have a name for the syndrome: Sudeck's atrophy. You have a treatment: ganglion block or sympathectomy. Should you try to logically put this all together, you have a shortfall. The block should aggravate the problem by increasing blood flow, which in turn should produce further demineralization of bone. No such thing happens, and you are sorry you tried to reason the thing out. Do not feel badly, as 50 years of trained investigators have hit the same wall.

To get back on the track of psychogenic pain; in 1929 Rene Leriche wrote that those who suffer (referring to psychogenic pain) do so indeed more than we can imagine. Time has neither diluted nor changed this observation. Somewhere, somehow, an impulse excited the perceptors (or is it perceptions?) in the thalamus. Endocrines

are elaborated and directly or indirectly the autonomic nervous system goes into action.

This same system causes the trip to the rest room before tackling the tough surgical problem, your face to redden with embarrassment. It causes perspiration and nausea with sudden shock. Should you try too hard to control it, the "cold fish" syndrome follows and you are less of a doctor. With no emotion, there is no compassion. Doctors need compassion.

An improved appreciation of psychogenic pain has much value in patient care. One facet of such understanding concerns trauma. This is particularly true when the trauma is either minor or more "alleged" than actual. Psychogenic pain following minor trauma usually surfaces as due to causes other than the physical insult—in short, the alleged trauma was merely the vehicle of transfer rather than the actual cause. Prolonged treatment with medicine and modalities in this situation usually harms more than it helps. To conceive a minor insult to the body as the cause of psychogenic pain is like grasping at a straw and coming up with a lumber yard. The real culprit is more likely problems at home or at work. The patient may subconsciously depend on the trauma to take care of his financial problems. On a one to ten curve the minor trauma would be in the less than one gradient. As a personal note, 40 years as an M.D. did not prepare me for making a diagnosis of malingering.

To tell the complaining patient that nothing is wrong is something of a copout. The Minnesota Multiphasic Personality Inventory (MMPI) will aid in determining whether you missed an important finding or whether no such finding exists. Another real value of the MMPI concerns prognosis. The "get well" factor can be pretty well predicted. By using the tools of the psychologist you can get the patient on the right track. You may still be wrong, but you get credit for trying.

Most patients would agree with that great philosopher, Don Meredith, "Ain't nobody perfect." But in any case, psychogenic pain is for real.

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Organ Donation and Transplantation

The Council on Scientific Affairs was asked to consider the adequacy of the AMA position on organ donation and transplantation in preparation for comment to the World Medical Association. On review of previous actions of the AMA House of Delegates, the Council determined that the AMA policy in this area should be revised.

The Judicial Council Report B (A-68) made the following statements for guidance of physicians in their transplantation practices:

1. In all professional relationships between a physician and his patient, the physician's primary concern must be the health of his patient. Care must be taken to protect the rights of both the donor and the recipient, and no physician may assume a responsibility in organ transplantation unless the rights of both donor and recipient are equally protected.

2. A prospective organ transplant offers no justification for relaxation of the usual standards of medical care. The physician should provide his patient, who may be a prospective organ donor, with that care usually given others being treated for a similar injury or disease.

3. When a vital, single organ is to be transplanted, the death of the donor shall have been determined by at least one physician other than the recipient's physician. Death shall be determined by the clinical judgment of the physician. In making this determination the ethical physician will use all available currently accepted scientific methods.

4. Full discussion of the proposed procedure with the donor and the recipient or their responsible relatives or representatives is mandatory.

5. Transplant procedures of body organs should be undertaken only (a) by physicians who possess special medical knowledge and technical competence developed through special training, study, and laboratory experience and practice; (b) in medical institutions with facilities adequate

to protect the health and well-being of the parties to the procedure.

6. Transplantation of body organs should be undertaken only after careful evaluation of the availability of the effectiveness of other possible therapy.

7. Medicine recognizes that organ transplants are newsworthy and that the public is entitled to be correctly informed about them. Normally a scientific report of the procedures should first be made to the medical profession for review and evaluation. When dramatic aspects of medical advances prevent adherence to accepted procedures, objective, factual, and discreet public reports to the communications media may be followed as soon as possible by full scientific reports to the profession.

That same year the AMA House of Delegates adopted the Uniform Anatomical Gift Act as described in Board of Trustees Report D (I-68). This Act facilitated the donation by any person during his lifetime of all or part of his body at the time of death for medical, educational, and scientific purposes. Gifts of such tissues after death were also permitted by the next of kin in the absence of any evidence of opposition by the deceased during his lifetime. This Act explains in detail: (1) who may execute an anatomical gift, (2) who may become donees, (3) purposes for which anatomical gifts may be made, (4) manner of executing anatomical gifts, (5) documentation of the gift, (6) the donor's right to amend or revoke the gift, (7) rights and duties of the donee at time of death, (8) the uniformity of interpretation in the several states. This Act has now been adopted by all 50 states and some 17 have made provisions for assigning such gifts as a part of the driver's license application.

The AMA Committee on Transfusion and Transplantation also drafted a Uniform Donor Card which was put into widespread use during the 1970s. This card was accompanied by a brochure on "Donation of Bodies or Organs for Transplantation and Medical Science," which received final approval by the AMA Board of

This is Council on Scientific Affairs Report D. Past House Action: C-68:97-101; A-68:101-103.

Trustees in 1971. The need for organ donor cards has diminished with the increasing number of states that utilize permission statements on the back of drivers' licenses.

A statement on Heart Transplantation in Board of Trustees Report U (I-68) particularized some of the more general comments above with regard to cardiac transplantation. The provision was added that the determination of death "in organ donors must be made by no less than two physicians not associated with the surgical team performing the transplant." At that time it was recognized that there would be a shortage of potential organ donors.

In order to facilitate the obtaining of donors, the AMA House of Delegates adopted Report P of the Board of Trustees (I-79) on the "Uniform Brain Death Act." The report recommended endorsement of the AMA model state legislation on brain death that allowed a determination of death to be made in accordance with accepted medical standards in an individual who has sustained either (1) irreversible cessation of circulatory and respiratory functions; or (2) irreversible cessation of all functions of the entire brain. It is hoped that more widespread adoption of this brain death law will make recruitment of donor organs more common.

Present State of the Art

Transplantation surgery represents one of the most important advances in surgical treatment today, but the exploitation of its full potential is at present limited by (1) lack of enough suitable donor organs and tissues, (2) the difficulty inherent in determining the death of patients maintained on artificial ventilation (cadaver donors), (3) the rejection phenomenon, and (4) the diminished quality of life left to most transplantation survivors.

Human organs can be obtained from both living and nonliving people. In the former, it is of course necessary to obtain an adequately informed consent authorizing the operative removal of the organ, which is most often a kidney. Such an operation does have complications and many surgeons are reluctant to operate on a healthy person for this purpose. Such living donors account for about 40% of renal transplants in the United States but account for a smaller percentage (approximately 15%) in Canada and Europe. One-year survival rates for kidney grafts from related living donors is about 70%, whereas for nonliving donors the United

States average is about 49%. Nevertheless, many surgeons refuse living donors, particularly minors or incompetent subjects: they feel that it is almost impossible to obtain a truly informed consent for such an operation.

Nonliving or cadaver donors have not yet reached the numbers which could be possible with appropriate planning. It has been variously estimated that 15 to 50 patients per million population, or somewhere between 1.6% and 3.5% of patients dying in acute care hospitals, may be appropriate donors. If these patients' organs could be made available there would be no shortage of kidney transplants for those 5,000 patients on renal dialysis who are considered suitable candidates by present-day standards. This might even satisfy the need for heart donors if the estimated 10,000 patients per year who might benefit from the operation were to be accommodated.

A registry of all organ transplants was established jointly by the American College of Surgeons and National Institutes of Health in 1961. In 1976, 25,000 kidney transplants had been registered for the entire world; 309 heart, 268 liver, 37 lung, and 49 pancreas transplants had also been recorded. In 1977 the kidney transplant registration was assumed by the End-Stage Renal Disease Medical Information System (ESRD-MIS) established in the Bureau of Quality Assurance of the DHHS Health Care Financing Administration. Since 1977 the Bureau of Quality Assurance has issued no further statistics on organs transplanted. The transplantation effort has suffered from the deemphasis on the registration function by the ESRD-MIS.

According to ESRD-MIS there are now in the United States about 850 Medicare-approved dialysis units including 158 with renal transplant teams. There are an additional five transplant teams that are not affiliated with any dialysis center. The United States has been divided into 32 network areas for purposes of organ procurement, but every large population center has access to one or more dialysis units and renal transplant teams. Thus, the national coverage for the 55,000 people with end-stage renal disease is now quite adequate, although maintaining a patient on even at-home renal dialysis is more expensive than the first year costs of a renal transplant operation.

The number of kidney transplants, which increased in the United States each year from the

early 1960s until 1976, seems to have plateaued for the past three years. This has been attributed to steady improvement in survival and comfort with dialysis alone and the hazards of current immunosuppressive therapy. Nevertheless, transplantation and dialysis should not be considered as competing modalities in the treatment of end-stage renal disease, but as interrelated phases of a program of care in which many patients will require both types of treatment. There are very few young to middle-aged patients in whom transplantation is contraindicated because of the nature of the original kidney disease; and, when it is successful, it allows a reasonably good existence free from the dialysis device with a quality of life superior to that of patients on dialysis.

Active procurement programs are being developed in many areas of the country wherein surgical teams travel to possible donors and retrieve all viable organs for preservation in a tissue bank. Usually a large tissue-typing laboratory is associated with the effort and has a list of patients awaiting transplantation who have already been tissue-typed. There is now improving ability to exchange kidneys between centers. A number of such regional kidney exchange programs have been established for renal transplantation and a few of them have incorporated the ability to retrieve and preserve donor hearts for several hours. There is Medicare reimbursement available for the retrieval of donor organs. However, no additional payment to the donor or his heirs is permitted by Medicare.

Cardiac transplantation which saw a great flurry of interest at many centers in 1969 became virtually limited to one active U.S. center in the mid-1970s. This initial experience revealed that the patients showed only minor gains in longevity in spite of a great commitment of medical resources. It was also found to be quite difficult to locate enough donors to meet the requirements for more than a few patients. There was then a virtual moratorium for much of the 1970s. However, the results recently reported from Stanford University suggest that heart transplantation can now achieve a success rate almost equal to that seen with kidney transplantation. This team has developed its own criteria for selection of patients and has its own regional program for harvesting donor organs. It has been currently performing 25 heart transplants per year with a 65% chance of the graft surviving for one year and a 50% chance of its lasting for five years after

transplantation. One patient has survived ten years and several patients have gone through repeat transplantation of second and third allografts. At present there are at least two other centers in the United States and two in London, England, which have again become engaged in heart transplantation efforts. With an increase in availability in donor organs and further improvements in control of the host-graft reaction, there will undoubtedly be further increase in the number of patients receiving heart transplantation.

Conclusion

With the general acceptance of transplant surgery, both by the profession and the public, its full realization cannot occur until an adequate number of donor organs is made available. Currently the best prospect for this is to facilitate the further development of a national network of cooperating regional programs for donor identification and organ collection. Under current circumstances of organ shortages, difficult decisions must be made as to who may receive the few organs available and who must go without. It is in the context of this present shortage of donor organs that most of the transplantation problems, both ethical and practical, are currently based. Adoption by all states of the Model Brain Death Law will help to alleviate legal obstacles to the collection of organs from patients having cerebral death. However, both physicians and the public must be further educated in the implications of organ donation by nonliving donors and in the dire need for retrieval of such organs.

Several ethical aspects of organ donation also need to be considered, now that the possibility of organ donation is a valuable alternative in the medical armamentarium. Should such criteria as age, sex, or other disease processes exclude a potential recipient when organs are in short supply? Under what circumstances should minors be allowed to be living donors? Should living donors ever be used to supply needed organs? Which psychiatric diagnoses should exclude a potential recipient from having a transplanted organ? What are the elements of an informed consent for a living donor and for an organ recipient? What is the physician's responsibility in the decision to discontinue renal dialysis, immunosuppression, or other life-sustaining treatment? Should a minimum standard be established for

(Continued on page 515)

Neoplastic Meningitis

JOHN D. HAINSWORTH, M.D. and F. ANTHONY GRECO, M.D., Editor

Malignant infiltration of the meninges is a serious complication associated with a wide variety of neoplasms. Once thought to be a rare problem, meningeal infiltration is now recognized as a very common problem in acute lymphocytic leukemia (ALL), occurring in 50% to 70% of cases.^{1,2} Involvement of the meninges by lymphoma and various carcinomas has also been recognized to be quite common; Olsen et al³ reported 50 cases seen at a single institution within a five-year period.

Establishing a diagnosis of neoplastic meningitis often requires a high index of suspicion, since symptoms and signs are extremely variable, and malignant cells may be difficult to find in the cerebrospinal fluid (CSF). It is important, however, to establish a diagnosis and to differentiate this problem from several other chronic meningeal processes. Current treatment can significantly alter the dismal four-week average untreated survival of neoplastic meningitis.⁴ This paper will review the clinical aspects of neoplastic meningitis, and give guidelines for confirming the diagnosis. In addition, current therapeutic methods will be discussed.

Incidence

The incidence of meningeal metastases varies with tumor type. The acute leukemias have the highest incidence of involvement, but the 50% to 70% incidence in childhood ALL was not observed until survival was prolonged with systemic chemotherapy. Improved control of disease outside the central nervous system (CNS) allowed occult CNS involvement to become manifest, and the CNS often became the initial area of relapse. A similar increase in meningeal involvement is being observed as treatment improves in the acute nonlymphocytic leukemias, with some series reporting a 20% incidence.^{5,6}

Involvement of the meninges by solid tumors is less common; meningeal tumor invasion was found at autopsy in 4% of patients with solid tumors in one study.³ The incidence in patients with solid tumors, however, also appears to be increasing, probably due to improvement in survival of patients with metastatic disease. The solid tumors most often associated with neoplastic meningitis are lymphoma, breast carcinoma, and lung carcinoma. Lymphoma and breast carcinoma each account for 30% to 40% of cases in various series, while lung cancer accounts for 10% to 20%.³ The remainder of cases are accounted for by tumors from a wide variety of primary sites, including melanoma, gastrointestinal tumors, and occasionally others.

Pathology

The pattern of tumor growth associated with meningeal involvement is distinctive, and all tumor types produce similar pathologic findings. Instead of forming nodules, the tumor grows in sheets along the surface of the brain and spinal cord. Tumor may spread in this way to involve the entire meningeal surface, or may remain localized to one area. In addition to growing along the meningeal surface, tumor can invade the subpial parenchyma or spinal nerve roots. On gross examination, a diffuse fibrotic thickening of the meninges is the most common abnormality, due mostly to tumor-evoked inflammatory reaction rather than to actual tumor. In some cases, tumor can be identified only by microscopic examination.

This pattern of pathologic involvement can produce signs and symptoms in several ways: direct parenchymal invasion or occlusion of penetrating blood vessels may produce focal neurologic signs including seizures, invasion of nerves within the subarachnoid space can produce cranial nerve or spinal root dysfunction, and obstruction of CSF pathways by tumor can cause increased intracranial pressure.

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Clinical Features

Meningeal involvement usually occurs in patients with known metastatic cancer. Only rarely is it the presenting manifestation of an occult malignancy. In these cases, the diagnosis can be difficult because it is not often considered.

Due to the diffuse nature of the pathologic involvement, neoplastic meningitis can present with a wide variety of signs and symptoms. The diagnosis should be suspected if signs and symptoms indicate involvement of more than one anatomic site. The importance of a careful neurologic examination has been repeatedly stressed; in one series,³ only 26% of patients had symptoms referable to multiple anatomic areas, while on neurologic examination, 80% had signs indicating at least two areas of involvement.

Table 1 lists the most common presenting signs in each of the three major areas of involvement. Headache and mental status changes are the most common signs of cerebral involvement, each occurring in 50% to 70% of patients. Seizures are relatively uncommon, occurring in 10% to 20% of patients at some time during the disease course. Cranial nerve dysfunction is common, and is often responsible for the presenting symptoms. Cranial nerves III, IV, VI, and VII are most commonly affected, but involvement of any of the other cranial nerves is not uncommon. With spinal cord involvement, the most frequent symptom is pain, either localized

to the back or radicular. Some type of pain occurs in more than 60% of patients during their disease course, and is frequently a prominent early symptom. Focal motor defects (present in 20% to 30% at diagnosis) are usually caused by spinal cord rather than cerebral involvement, and usually occur in the lower extremities. Bowel and bladder dysfunction is uncommon in neoplastic meningitis, in contrast to extradural cord compression, where it is a prominent symptom.

With disease progression, neurologic symptoms usually worsen quite rapidly. The patient rapidly becomes totally disabled, with worsening mental status and increasing cranial nerve and focal motor deficits. Death is either caused by progressive neurologic deterioration or by intervening complications due to debility.

Diagnosis

The demonstration of malignant cells in the CSF is required to establish the diagnosis of neoplastic meningitis. Malignant cells are sometimes present in large numbers, and the diagnosis in these cases is made easily. On the other hand, malignant cells are detected on the first CSF examination in only 40% to 50% of cases,^{3,7,8} so that repeated CSF examinations are necessary if the diagnosis is suspected. At least five CSF examinations are necessary to adequately evaluate a patient for neoplastic meningitis. Even with repeated examinations, in a small number of patients (less than 5%) malignant cells will not be found in the CSF.

The remainder of the CSF examination, while nonspecific, can be of use in either strengthening or dampening suspicion of the diagnosis. A *completely* normal examination (including opening pressure, glucose, protein, and cell count) effectively rules out the diagnosis. Most patients with neoplastic meningitis have a moderately elevated protein (in the 50-500 mg/dl range), and moderately elevated opening pressure. Glucose levels are decreased in 30% to 50%. Cell counts are usually moderately elevated, with predominantly mononuclear cells, but all of these findings are variable, and it is common to find only an elevated CSF protein or only an elevated opening pressure in patients with positive cytology. A variety of chronic meningitides, including tuberculosis, cryptococcosis, and other fungal infections can produce identical clinical and CSF findings, and should be considered in the differential diagnosis.

Neoplastic meningitis is only rarely the initial

TABLE 1

COMMON NEUROLOGICAL MANIFESTATIONS
OF NEOPLASTIC MENINGITIS

Symptom	Approximate Incidence at diagnosis (%)
Cerebral	
Headache	50-70
Mental status change	50-70
Seizures	10-20
Ataxia	10-20
Cranial Nerve	
III, IV, VI dysfunction	40-50
VII dysfunction	30-40
Others	15-30
Spinal	
Pain—back	20-30
radicular	15-20
Focal weakness	20-30
Sensory loss	40-50
Absent deep tendon reflexes	50-60

manifestation of malignancy. The onset of new neurologic signs in a patient with known malignancy, especially if coupled with nonspecific CSF abnormalities, should lead to a careful search for neoplastic meningitis.

Treatment

The current treatment of neoplastic meningitis, although far from ideal, has made some impact on the dismal four-week average untreated survival of these patients. The two recent developments that represent definite treatment advances are the use of intrathecal antineoplastic agents, and the increasing use of the Ommaya reservoir for intrathecal administration of drugs.

Early attempts at therapy involved radiation to symptomatic areas of the neuraxis. This approach had little success due to the diffuse nature of the meningeal involvement. Radiotherapy to the entire brain and spinal cord produced some significant remissions,⁹ but was generally undesirable, since it produced myelosuppression which interfered with systemic chemotherapy. Although radiotherapy is not indicated as the only treatment, radiation to a symptomatic area in conjunction with intrathecal chemotherapy probably gives better local relief of symptoms than does chemotherapy alone.

The development and increased use of the Ommaya reservoir has provided easy access to the subarachnoid space, which is important when multiple drugs are required. The placement of a reservoir is usually a relatively easy procedure, and can be accomplished with little morbidity by an experienced neurosurgeon. Multiple studies have demonstrated that intraventricular administration of drugs produces better CSF drug distribution than lumbar administration¹⁰; this is perhaps the most important advantage of the Ommaya reservoir. Complications associated with the use of the reservoir are uncommon, but have included malfunction of the device, infection, and "migration" out of the ventricle into adjacent brain substance.¹¹

The intrathecal use of antineoplastic agents is currently the treatment of choice for neoplastic meningitis. To date, only three antineoplastics have been used intrathecally: methotrexate, cytosine arabinoside (Ara-C), and N,N',N''-triethylenethiophosphoramide (Thiotepa). Methotrexate has been the most widely used, and has demonstrated activity against a wide variety of tumors. Its use along with cranial irradiation for the CNS prophylaxis of childhood ALL has

provided the most dramatic demonstration of its efficacy. Following treatment with intrathecal methotrexate and radiotherapy, the incidence of overt CNS involvement is only 5% to 10%, compared to 50% to 70% in untreated patients.¹² Methotrexate is also useful in the intrathecal treatment of overt CNS ALL; 70% to 80% of patients achieve remissions of eight to ten months average duration, with a few long-term survivors.^{13,14} Griffin et al¹⁵ showed CSF and clinical responses in 7 of 13 patients with lymphomatous meningitis, with survival in responders of five months. Young et al¹⁶ reported similar results in patients with breast carcinoma involving the meninges: 68% response rate, and five months average survival. Other types of carcinomatous meningitis (lung, gastrointestinal, melanoma) have demonstrated only 25% to 30% response rates, with minimal prolongation of survival.³

Methotrexate has been administered intrathecally at doses of 6.25-10 mg/sq m, with resulting therapeutic CSF levels which persist 24 to 48 hours.¹⁰ The most frequent adverse reaction to intrathecal methotrexate is an acute arachnoiditis characterized by nausea, vomiting, mental status changes, and occasionally grand mal seizures. This syndrome is associated with high CSF levels of methotrexate. Recent data show that the use of body surface area to calculate methotrexate dosage produces overdosing in adults, since CSF volume remains relatively constant after the age of 3.¹⁷ The use of a fixed dose of methotrexate (12 mg) resulted in achievement of therapeutic CSF levels with a marked decrease in the incidence of arachnoiditis.¹⁷ Other uncommon toxic CNS reactions to intrathecal methotrexate include transverse myelitis and acute hypersensitivity reactions,¹⁸⁻²⁰ and leukoencephalopathy following chronic administration.²¹ Methotrexate slowly escapes from the CSF and produces prolonged low serum levels adding to myelosuppression in patients receiving concomitant systemic chemotherapy.

Ara-C, a synthetic pyrimidine nucleoside, has been shown to be an effective agent when administered intrathecally in patients with acute leukemia or lymphoma. Band et al²² showed CSF clearing and clinical improvement in ten of ten patients with acute lymphoblastic leukemia (three previously treated with methotrexate and radiotherapy), with a response duration of six months. Wang and Pratt²³ gave intrathecal Ara-C to 13 children with ALL (11 previously treated

with methotrexate and/or radiotherapy), and had seven responses, median 28 days. Ziegler et al²⁴ showed CSF clearing in three patients with Burkitt's lymphoma using Ara-C, after intrathecal methotrexate had failed. No data are available concerning the use of intrathecal Ara-C in the treatment of carcinomatous meningitis. Ara-C has been used at doses of 10-40 mg/sq m, with occasional headache and vomiting observed at the higher doses. The most serious side effect reported has been the occurrence of grand mal seizures in two young children (less than 4 years of age) when given Ara-C at a dose of 30 mg/sq m, but the diluent contained benzoyl alcohol preservative, so the etiology of the seizures is unclear.²⁵ Ara-C is rapidly deaminated as it escapes from the CSF, and no systemic toxicity has been observed.

Published data concerning the efficacy of intrathecal Thiotepa is limited. Gutin et al²⁶ treated 11 patients (8 ALL, 2 lymphoma, 1 ependymoma) with intrathecal Thiotepa at doses ranging from 1-10 mg/sq m. Three patients had complete responses, and five others had partial responses. Six patients had received prior CNS treatment with methotrexate, Ara-C, or radiotherapy. Toxicity of Thiotepa in this dose range was not observed.

In spite of the demonstrated activity of these three agents, remission durations are brief, and prognosis remains poor in patients with neoplastic meningitis. Studies using combinations of intrathecal drugs are currently under way at Vanderbilt Medical Center, in an attempt to increase remission rates and response duration. Although this approach may prove superior to the use of single agents, the chance of a dramatic improvement in the treatment of neoplastic meningitis in the near future seems small, especially when dealing with tumor types that are resistant to systemic therapy as well.

Summary

Neoplastic meningitis is a serious and usually fatal complication of malignancy, with a median untreated survival of four weeks. Although associated with a wide variety of tumors, the majority of cases occur in association with acute leukemia, lymphoma, and breast carcinoma. Symptoms and signs are variable, but usually involve multiple areas of the neuraxis. CSF characteristics are also nonspecific, and the diagnosis depends on the demonstration of malignant cells. Repeated CSF examinations are

often necessary to detect malignant cells. Optimum treatment involves the administration of antineoplastic agents via an Ommaya reservoir. Methotrexate, Ara-C, and Thiotepa have all shown activity, but their relative merits have not been systematically studied. Radiotherapy to symptomatic areas can be of added benefit in some patients. Responding patients achieve substantial palliation and a minority of the patients are maintained in remission for more than a year. Further improvements in treatment are obviously needed; studies with combinations of intrathecal drugs are currently under way at Vanderbilt.

REFERENCES

- Boyle JM, Brubaker CA, et al: Central nervous system involvement by leukemia in children. *Blood* 25:1-12, 1965.
- Freireich EJ, Nies BA, Thomas LB: Meningeal leukemia. A follow-up study. *Cancer* 18:546-553, 1965.
- Olson ME, Chemik NL, Posner JB: Infiltration of the leptomeninges by systemic cancer. *Arch Neurol* 30:122-137, 1974.
- Posner JB: Management of central nervous system metastases. *Semin Oncol* 4:81-91, 1977.
- Dawson DM, Rosenthal DS, Moloney WC: Neurological complications of acute leukemia in adults. Changing role. *Ann Intern Med* 79:541-551, 1974.
- Meyer RJ, Ferreira PPC, et al: Central nervous system involvement at presentation in acute granulocytic leukemia. *Am J Med* 68:691-694, 1980.
- Spriggs AI: Malignant cells in cerebrospinal fluid. *J Clin Pathol* 7:122-130, 1954.
- Wagner JA, Frost JK, et al: Subarachnoid neoplasia: Incidence and problems of diagnosis. *South Med J* 53:1503-1508, 1960.
- Heathfield KWG, Williams JRB: Carcinomatosis of the meninges: Some clinical and pathologic aspects. *Br Med J* 1:328-330, 1956.
- Shapiro WR, Young DF, Mehta BM: Methotrexate: Distribution in cerebrospinal fluid after intravenous, ventricular, and lumbar injections. *N Engl J Med* 293:161-165, 1975.
- Bleyer WA, Pizzo PA, et al: The Ommaya reservoir. Newly recognized complications and recommendations for insertion and use. *Cancer* 41:2431-2437, 1978.
- Price RA, Jamieson PA: The central nervous system in childhood leukemia. *Cancer* 35:306-318, 1975.
- Morgan E, Donaldson MH, Meadows AT: The value of maintenance therapy following treatment of CNS leukemia. *Cancer* 40:1005-1009, 1977.
- Gribbin MA, Hardisty RM, Chessells JM: Long-term control of CNS leukemia. *Arch Dis Child* 52:673-678, 1977.
- Griffin JW, Thompson RW, et al: Lymphomatous leptomeningitis. *Am J Med* 51:200-210, 1971.
- Young DF, Shapiro WR, Posner JB: Treatment of leptomeningeal cancer. *Neurology* 25:370-375, 1975.
- Bleyer WA: Clinical pharmacology of intrathecal methotrexate. II. An improved dosage regimen derived from age-related pharmacokinetics. *Cancer Treat Rep* 61:1419-1425, 1977.
- Back EH: Death after intrathecal methotrexate. *Lancet* ii:1005, 1969.
- Rosner F, Lee SL, et al: Intrathecal methotrexate. *Lancet* i:249-250, 1970.
- Saiki JH, Thompson S, et al: Paraplegia following intrathecal chemotherapy. *Cancer* 29:370-374, 1972.
- Norrell H, Wilson CB, et al: Leukoencephalopathy following the administration of methotrexate into the cerebrospinal fluid in the treatment of primary brain tumors. *Cancer* 33:923-932, 1974.
- Band PR, Holland JR, et al: Treatment of central nervous system leukemia with intrathecal cytosine arabinoside. *Cancer* 32:744-748, 1973.
- Wang JJ, Pratt CB: Intrathecal arabinosyl cytosine in meningeal leukemia. *Cancer* 25:531-534, 1970.
- Ziegler JL, Morrow RH, et al: Treatment of Burkitt's tumor with cyclophosphamide. *Cancer* 26:474-484, 1970.
- Eden OB, Goldie W, et al: Seizures following intrathecal cytosine arabinoside in young children with acute lymphoblastic leukemia. *Cancer* 42:53-58, 1978.
- Gutin PH, Weiss HD, et al: Intrathecal N,N', N"-triethylenethiophosphoramide (Thiotepa NSC 6396) in the treatment of malignant meningeal disease. *Cancer* 38:1471-1475, 1976.

Fatty Liver in Diabetes Mellitus

Ruth Miller, M.D. (Endocrinology Fellow — St. Thomas Hospital): The patient is a 66-year-old woman who has had diabetes for two years. Although she has adult-onset type diabetes, she has required insulin for control of hyperglycemia since the diagnosis was established. Five years ago she had exploratory laparotomy for unexplained abdominal pain, at which time she was found to have pancreatitis. A liver biopsy showed fatty infiltration of the liver, hyperlipemia was discovered, and she was placed on clofibrate (Atromid-S) for the next few years. Follow-up liver biopsies were done on two occasions, both showing fatty infiltration. Currently, she has been taking 38 units of NPH insulin with poor control. Her blood sugar a few days before admission was 560 mg/dl in her physician's office. She has had frequent glucosuria and occasional sweating spells.

Past history included two stillbirths, death of an infant in the neonatal period, and one transfusion with a Cesarean section 30 years ago. There is no history of alcohol use or jaundice.

Her mother had non-insulin-requiring diabetes.

Examination revealed her to be moderately obese. The liver edge was felt 5 cm below the right costal margin and extended to the umbilicus. The spleen tip was felt 2 cm below the left costal margin. The rest of the examination was unremarkable.

Laboratory studies showed average plasma glucose levels about 250 mg/dl and glycosylated hemoglobin value of 10.5% (normal less than 8.5%). The alkaline phosphatase was 103, SGOT 95, cholesterol 239, fasting triglyceride level 350 mg/dl, bilirubin and prothrombin time within normal limits, and the test for HBAg was negative. Thyroid function was normal. A

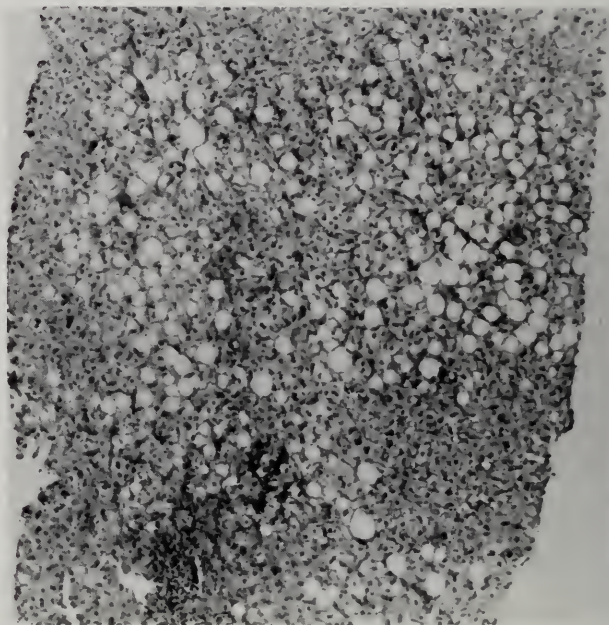


Figure 1. Liver biopsy in a diabetic woman showing moderate fatty infiltration accompanied by scarring and regenerative nodules characteristic of cirrhosis.

cholecystogram showed no visualization of the gallbladder, and gallstones were demonstrated on abdominal ultrasound. A cholecystectomy was performed, and a liver biopsy at that time showed cirrhosis.

Richard Schneider, M.D. (gastroenterologist, St. Thomas Hospital): The liver biopsy performed at Vanderbilt Hospital two years ago, where the patient had her third needle biopsy, showed fatty infiltration (2+ on a scale of 4), and some inflammatory cells and early fibrosis of the periportal areas. Biopsy now seems worse in that there is definite scarring with regenerative nodules typical of cirrhosis (Fig. 1). Because of sampling errors on liver biopsies, one cannot be dogmatic in stating that progression has occurred over the past two years, but the current biopsy specimen appears worse than the material obtained two years ago.

Fatty infiltration of the liver is seen most commonly with alcoholism, but also with obesity, steroid use, diabetes, and other conditions.

The Diabetes Clinical Care Conference at St. Thomas Hospital, Nashville, Tenn., a collaborative educational program of the St. Thomas Department of Hospital Education and the Vanderbilt Diabetes Research and Training Center, is coordinated by Joy Woodard, R.N. and edited by Alan L. Graber, M.D.

If there is evidence of inflammation also, we once suspected alcoholic hepatitis, even if the patient denied the use of alcohol. We also formerly thought that fat in the liver was a reversible, benign change, and that permanent scarring or cirrhosis did not occur unless inflammation accompanied the fat, but evidence accumulated in the last eight years, primarily through studies of serial liver biopsies in patients undergoing jejunal-ileal bypass, indicates that fatty liver is not necessarily benign, and occasionally does progress to cirrhosis. In addition, the frequency of fatty infiltration of the liver in obesity is quite high. In one study, 94% of 151 patients undergoing jejunal-ileal bypass had some fat in the liver before the bypass was performed, eight of them had moderately severe inflammatory changes, 28% had fibrosis around the portal triads, and six of the 151 patients had cirrhosis, in three severe. All denied alcohol use. The majority were women and it is not known how many had diabetes.^{1,2}

Creutzfeldt stated that 25% to 75% of diabetics have fat in the liver and that it is more common in the adult-onset type disease than in the juvenile-onset cases. Investigators think that these fatty livers are related more to obesity than to diabetes, but some diabetic patients who have fatty liver are not obese, and the patient presented today was only moderately overweight. In summary, fatty change in the liver occurs frequently in obesity, and perhaps is also related to diabetes, though the mechanism for this is obscure. Though it is common, it is not necessarily a benign or nonprogressive disorder as was previously believed. How often nonalcoholic fatty liver progresses to fibrotic liver disease is still a matter of controversy.

Dr. Miller: Patients with jejunal-ileal bypass who develop liver disease sometimes have a fulminant course and die of hepatic failure. Does this occur in the patients with obesity and/or diabetes who do not have an intestinal bypass?

Dr. Schneider: Generally no. These cases of cirrhosis are clinically quiescent for years and the patient may present with a complication of cirrhosis, such as varices or ascites.

Alan L. Graber, M.D. (endocrinologist, St. Thomas Hospital): For several years we have followed two patients with massive hepatic enlargement due to fatty infiltration, with livers extending well below the umbilicus, with apparently no progression, and little clinical evidence of symptomatic liver disease except for vague right upper quadrant discomfort due to the size of the liver.

Rodney Lorenz, M.D. (pediatrician, Vanderbilt Diabetes Research and Training Center): We have seen fatty livers in juvenile, insulin-dependent diabetic patients under very poor metabolic control. However, we don't know the long-term follow-up of these patients.

Dr. Graber: In summary, fatty liver occurs both in insulin-dependent and non-insulin-dependent forms of diabetes, in both children and adults. Its frequency, relationship to obesity, relationship to control of hyperglycemia, and relationship to coexisting hyperlipidemia and other diseases are still subjects of investigation. The clinical course, as presently understood, is variable, but at least some cases progress to cirrhosis.

REFERENCES

1. Ludwig J, Viggiano TR, McGill DB, et al. Nonalcoholic steatohepatitis. *Mayo Clin Proc* 55:434-438, 1979.
2. Adler M, Schaffner F: Fatty liver hepatitis and cirrhosis in obese patients. *Am J Med* 67:811-816, 1979.

Organ Donation and Transplantation...

(Continued from page 509)

institutional committees that select patients for organ transplantation efforts?

Recommendations

The Council on Scientific Affairs recommends that the AMA (1) continue to urge the citizenry to sign donor cards and continue to educate the public in the desirability of, and the need for, organ donations through a new public relations

campaign in support of a "gift of life"; (2) update the AMA's ethical position regarding several aspects of organ donation and transplantation which have not yet been addressed by the organization; (3) recommend to the Bureau of Quality Assurance of HCFA that it reestablish an active registry of renal and cardiac transplantation so that full follow-up information may be made available.

EKG of the Month

W. BARTON CAMPBELL, M.D.

A 69-year-old woman was admitted to St. Thomas Hospital for evaluation of increased lethargy and fatigability. She gave a history of long-standing hypertension and progressive renal failure. Three months previously she was evaluated for edema and was found to have 4+ proteinuria. The BUN was 95 mg/dl, with a creatinine of 6.7 mg/dl. RA latex and ANA studies were reported as "positive." Thyroid function studies were within normal limits. Medications prior to admission were propranolol (Inderal) 80 mg daily, apresoline (Hydralazine) 100 mg daily, and furosemide (Lasix) 40 mg daily.

At the time of admission the blood pressure was 130/70 mm Hg. No edema was present. The chest was clear, and no murmurs, rubs, or gallops were audible. The admission hematocrit was 27%, potassium was 3.4 mEq/liter (normal 3.4 to 4.9) with a chloride of 86 mEq/liter (normal 101 to 110). BUN was 105 mg/dl, calcium was 8.1 mg/dl (normal 8.5 to 10.5) with an albumin of 3.8 gm/dl (normal 3.5 to 5). An electrocardiogram was obtained (Fig. 1).

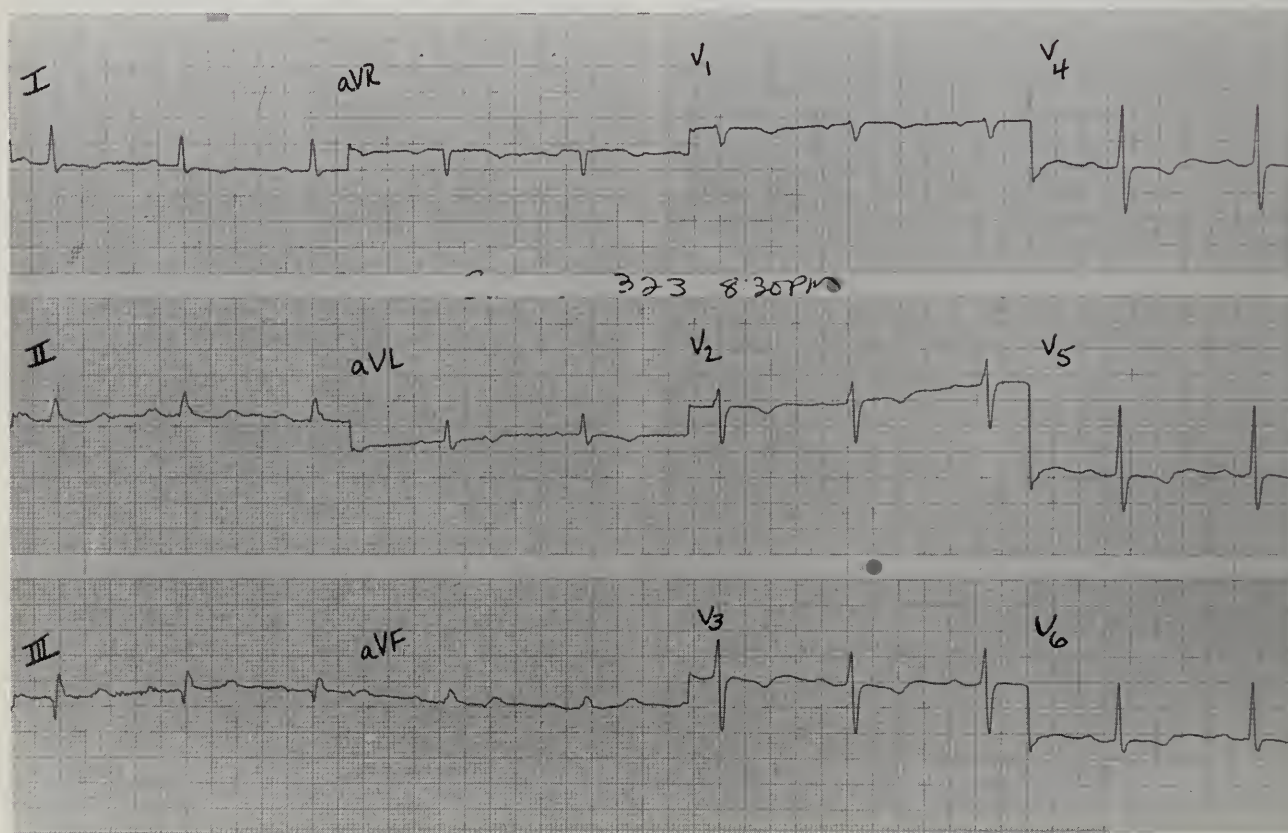


Figure 1

From the Department of Cardiology, St. Thomas Hospital, Box 380, Nashville, TN 37202.

Discussion

This electrocardiogram shows sinus rhythm at a rate of 57/min. The PR interval is prolonged at 0.27 seconds. The QRS duration is increased at 0.11 seconds. The late QRS forces are slightly rightward with a terminal S in standard lead I and in V_6 . There is no late anterior force to suggest right bundle branch block. This intraventricular conduction delay must be considered nonspecific (i.e., not due to either right or left bundle branch block). The patient is taking propranolol which causes slowing in phase 0 of the action potential and this may account for some widening of the QRS complex. The PR interval may be similarly prolonged by propranolol therapy, but it is unusual for propranolol to cause marked atrioventricular or intraventricular conduction defects.

As the QT interval varies with heart rate it has been customary to correct for these variations with a method proposed by Dr. Bazett. The measured QT interval (in seconds) is divided by the square root of the RR interval (also in seconds) $\left(\sqrt{\frac{QT}{RR}}\right)$. This "corrected" QT interval is referred to as QT_c . The QT_c for adults should range from 0.35 to 0.44 seconds.¹ The measured QT interval is 0.52 seconds and since the RR interval is nearly one second, the QT_c is only slightly less (0.51 seconds). Hypocalcemia causes prolongation of the QT_c primarily by prolonging phase II (the plateau phase) of the action potential.² The T wave duration is not notably changed because a

prolonged ST segment is present with an increased interval from Q wave to onset of T wave. Alkalosis also produces QT_c prolongation, and propranolol therapy may additionally contribute to QT_c prolongation. This patient had the slight muscular tremor (noted in the standard limb leads) which often accompanies hypocalcemia.

Inverted T waves are present in I, aVL and the precordial leads. This is also a nonspecific finding seen in a wide variety of metabolic disorders. Hypocalcemia alone does not commonly cause T wave inversion.³ Patients with uremia may commonly have hypocalcemia associated with hyperkalemia (which causes prolonged QT_c with tall narrow-based T waves) but this patient has a low normal potassium concentration. Hyperphosphatemia usually accompanies hypocalcemia in patients with uremia. The electrocardiographic effects of hyperphosphatemia await further study.

CONCLUSIONS: (1) Hypocalcemia with prolonged QT_c , (2) first degree AV block, (3) intraventricular conduction defect, (4) nonspecific ST-T wave changes. 

REFERENCES

1. Friedman HH: *Diagnostic Electrocardiography and Vectorcardiography*. New York, McGraw-Hill, 1971, p 464.
2. Temte JV, Davis LD: Effective calcium concentration on transmembrane potentials of Perkinji fibers. *Circ Res* 20:32, 1967.
3. Bronsky D, Dubin A, Waldstein SS, et al: Calcium in the electrocardiogram; I. The electrographic manifestations of hypoparathyroidism. *Am J Cardiol* 7:823, 1951.

Help for Impaired Physicians

Through its Committee on Impaired Physicians, TMA helps doctors who are suffering from alcoholism, other drug addiction, psychiatric disorders or senility. The thrust of the program is rehabilitative, not punitive. The Committee is composed of physicians who have special expertise in these areas, some from personal experience. Effective treatment for these illnesses is achieved most easily when the disease is detected early and family, friends, and associates are urged to avoid misguided sympathy which enables the condition to deteriorate.

HELP US TO HELP

Call the TMA Impaired Physician Program (615) 327-2711; outside Nashville call collect. Phone service available around the clock.

Radiology Case of the Month

RANDALL L. SCOTT, M.D.

A 47-year-old white man presented with a long history of intermittent dysphagia and arthralgias. Physical examination revealed decreased pliability with rigidity of the soft tissues of the hands and fingers. Several telangiectases were noted on the skin. The laboratory examination revealed a negative FANA and a negative LE prep. Selected films from an upper gastrointestinal (GI) series are submitted for your interpretation. What is your diagnosis?

- (1) Mechanical small bowel obstruction
- (2) Sprue
- (3) Achalasia
- (4) Scleroderma

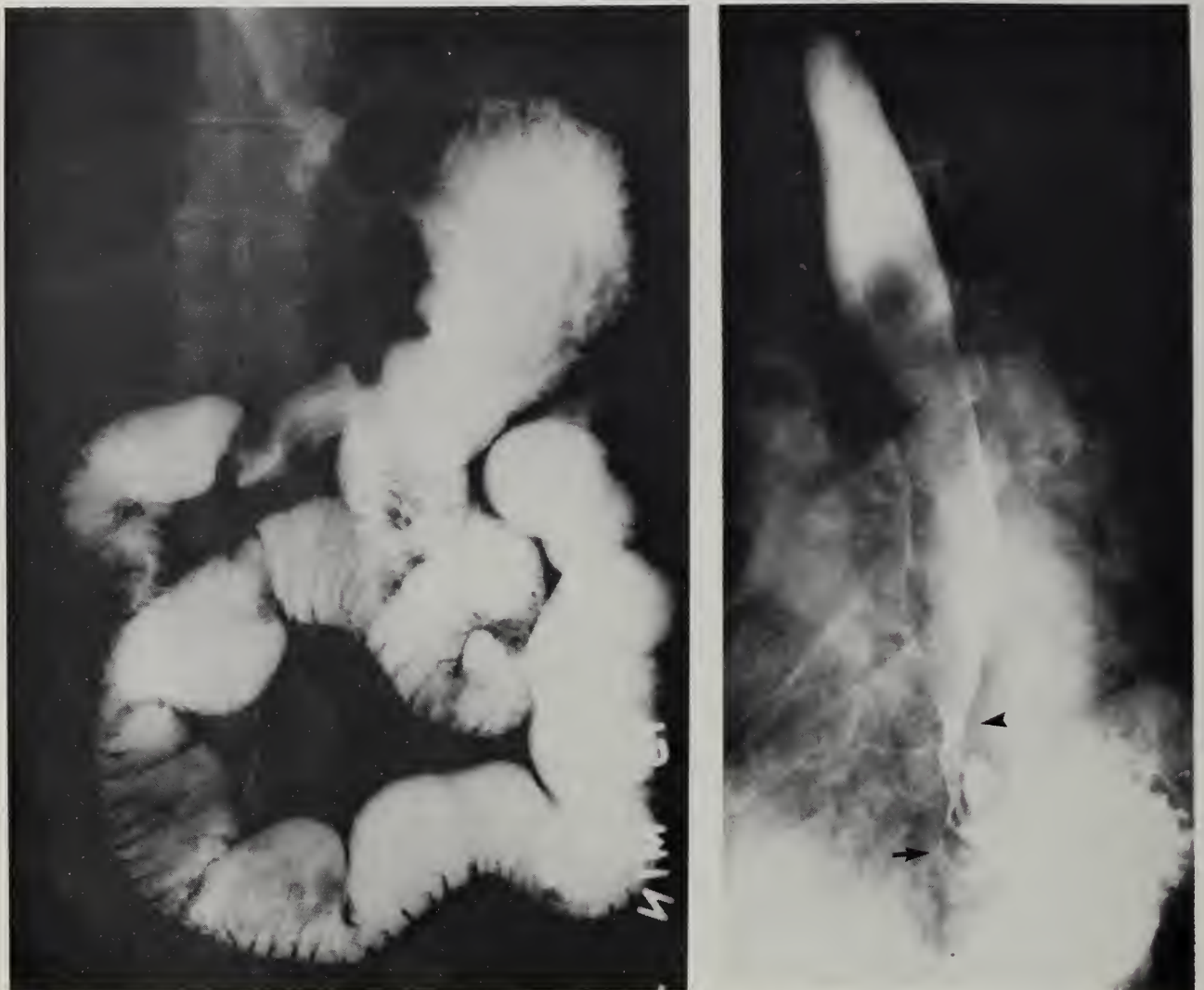


Figure 1. (Left) Barium-filled upper GI tract demonstrates dilated, asymmetrical loops of jejunum with normal-sized mucosal folds. (Right) Barium esophagram demonstrates esophageal dilatation, distal esophageal structure (arrowhead), and hiatal hernia (arrow).

From the Department of Radiology, University of Tennessee Center for the Health Sciences, 865 Jefferson Ave., Memphis, TN 38163.

Radiographic Findings

Figure 1 (*left*) is a film from the patient's upper GI series which demonstrates dilatation of several proximal small bowel loops with normal-sized mucosal folds. Although the hallmark of mechanical small bowel obstruction is dilatation of small bowel loops, no history of crampy abdominal pain was given. In addition, physical examination of the abdomen was unremarkable.

Sprue, or adult celiac disease, consists of intestinal malabsorption of virtually all nutrients due to a defect in the small bowel mucosa. Following withdrawal of gluten-containing cereal from the diet, rapid clinical improvement occurs. Because of the malabsorption, diarrhea, weight loss, and weakness develop, and excessive fat is noted in the stool.¹ Radiographically, barium examination of the small bowel demonstrates dilatation, segmentation, and flocculation of the barium meal, with coarsening or obliteration of the mucosal folds. Although proximal bowel dilatation is present in this case, the other radiographic findings are lacking, and the history and physical examination were not consistent with sprue.

Figure 1 (*right*) demonstrates some uniform dilatation of the esophagus. In addition, there is a small hiatal hernia and a distal esophageal stricture. At fluoroscopy diminished primary peristaltic waves were noted within the esophagus, and spontaneous gastroesophageal reflux was demonstrated.

Achalasia is a chronic affliction of the esophagus presenting as slowly progressive dysphagia. It involves patients of all ages and both sexes. Radiographically, as the disease progresses, tortuosity and dilatation of the esophagus develops, there is a characteristic smooth, "beak-like" narrowing of the distal esophagus, and the distal two thirds of the esophagus demonstrates no peristaltic response to swallowing. Pathologically, there is impaired cholinergic innervation to the esophageal myenteric plexuses with secondary failure of relaxation of the lower esophageal sphincter.^{2(p 1491)} Although this patient did demonstrate some esophageal dilatation, primary peristalsis was not absent. Also, the demonstration of spontaneous gastroesophageal reflux is inconsistent with the persistent lower esophageal sphincter spasm that is characteristic of achalasia. In addition, the small bowel dilatation present in this case is not a feature of achalasia.

The combination of small bowel dilatation and the esophageal abnormalities described above, particularly with a history of dysphagia, suggests scleroderma as the most likely diagnosis. Characteristically, this disease is associated with esophageal hypomotility, shortening of the esophagus with a sliding hiatal hernia leading to spontaneous gastroesophageal reflux, esophagitis, and stricture. Smooth muscle atrophy with replacement by collagen is the hallmark of this connective tissue disorder. This results in asymmetric small bowel dilatation and a normal mucosal fold pattern such as is present in this case. This patient's clinical findings of joint pain and skin changes further typify scleroderma.

Discussion

Scleroderma (progressive systemic sclerosis) is a systemic collagen vascular disease characterized by proliferation of fibrous connective tissue and vasculitis. Fibrosis involves the skin as well as a variety of viscera, specifically the GI tract, lung, kidney, and heart. The most notable clinical characteristic is the tight, firm, shiny skin of the hands and fingers (sclerodactyly), which may be present several years before documentation of visceral involvement.^{2(p 2074)}

Scleroderma usually develops in individuals aged 20 to 50 years and has a two-to-one female-to-male preponderance.³ Physiologically, scleroderma patients synthesize and deposit excessive amounts of collagen as a response to an idiopathic periarterial vasculitis. Sclerosis and fibrosis of visceral tissues are the result.^{2(p 2074)}

Radiographically, the gastrointestinal tract usually demonstrates hypomotility due to submucosal infiltration with collagen tissue. In the esophagus this causes diminished primary peristalsis with fibrosis and shortening of the esophagus. Later in the course of the disease distal esophageal reflux leads to esophageal stricture and dilatation, such as was seen in this patient. Similarly diminished tone and dilatation are present throughout the GI tract, particularly in the second portion of the duodenum, jejunum, and colon. Atrophy of the muscularis of the large bowel may lead to the development of large-mouthed diverticula distributed in an asymmetrical, random fashion.⁴

Pulmonary involvement by scleroderma often causes a radiographically detectable diffuse in-

(Continued on page 521)

Progress Report on the Screening Program For Congenital Hypothyroidism

The Tennessee Department of Public Health activated the program of screening newborn infants for primary congenital hypothyroidism on Oct. 1, 1980. The state law which required that this new test be added to the PKU screening program was supported heavily by physicians, especially pediatricians and others who care for children, with the hope that early detection would permit early treatment and thereby prevent the deleterious effects of hypothyroidism. The screening tests, performed on the filter paper blood spots (submitted for PKU) by micro-radioimmunoassay, indicate neonates with abnormal values—low T_4 (thyroxine) and elevated TSH (thyroid stimulating hormone).

Under the guidance of the Center for Disease Control, the Tennessee State Laboratory early began preliminary and background testing in order to accumulate a large backlog of values from which normals could be established for our population. It has been determined that T_4 values of approximately $5.5 \mu\text{g/dl}$ are low. If the TSH is elevated above 20, the physician is notified promptly. Efficiency in reporting the results back to physicians is greatly improved if full information is indicated on the simplified request form. As with all screening tests, the final values need more precise clarification by other methods which require larger amounts of blood. The reports from the state laboratory to physicians (or providers) are designed to suggest further steps to aid in the clarification of the diagnosis; however, their function is to indicate infants who are suspected—not to make the diagnosis. This is the physician's prerogative.

All screening tests produce false positives, e.g., many infants with slightly low T_4 and normal TSH values will prove to have normal

thyroid function. To further complicate matters, T_4 levels change rapidly in the first days and weeks of life. Infants with congenital thyroid binding globulin (TBG) deficiency—a benign disorder with an incidence of about 1:500—may have low T_4 and normal TSH values in early life.

About 10% of blood samples in this program will have borderline values. A few of these will later prove to be due to hypothyroid function, while the majority will turn out to be normal. It is important that the infants with low T_4 and elevated TSH values be called back without delay and examined again. As of mid-March, 1981, about 32,000 samples had been assayed. The harvest included three infants with low T_4 (less than 5.5) and elevated TSH (greater than 100). By the time our report was telephoned, the pediatrician of one child already had initiated replacement therapy since the severe neonatal jaundice led him to suspect that the new infant in the family might have a condition similar to that of an older sibling with congenital hypothyroidism. He had sent a sample of blood to the hospital laboratory which confirmed his suspicion. Our report assisted the physicians with the other two—one of which had undiagnosed prolonged neonatal jaundice. In addition, there have been two other babies whose values were less deviant but who needed further study. By the end of a year of testing, we expect to identify 12 to 14 affected infants in Tennessee.

Since the prompt and early instigation of replacement therapy is urgent, it is important to submit the blood samples early. The state laboratory has greatly improved efficiency in completing the required assays on positive specimens. The biggest problems now include improper specimens (spots not completely filled) and incomplete information on the request form. Physicians can help by urging the personnel who perform these tasks to adequately fill with blood

From the Tennessee Department of Public Health, Nashville.

the circles on the filter paper strip and to complete all items on the simple request form which accompanies the sample.

The regional genetics centers are available to assist in counseling and following the patients. Call them if you need help:

East Tennessee State University
(615) 928-6426, ext. 301

University of Tennessee-Knoxville
(615) 971-3911

Meharry Medical College
(615) 327-6763

Vanderbilt University
(615) 322-3346

University of Tennessee-Memphis
(901) 528-6594

For questions regarding state laboratory results, please call Bruce Popp, genetic program coordinator, phone (615) 741-3596 or (615) 741-7335.



Radiology Case of the Month...

(Continued from page 519)



Figure 2. PA chest radiograph demonstrates bibasilar fibrosis.

terstitial fibrosis with a predilection for the bibasilar regions (Fig. 2). Other systemic involvement leads to arthritis and arthralgias, cardiac arrhythmias due to myocardial fibrosis, telangiectases, and glomerulosclerosis due to renal vasculitis.^{2(p 2074)} Long before significant multivisceral symptoms are manifest, patients with scleroderma may develop Raynaud's phenomenon in the hands, with fingertip ulcerations and hypersensitivity to temperature extremes. Raynaud's phenomenon may precede the changes of scleroderma by months or even years.^{2(p 2075)}

ANSWER: (4) Scleroderma.



REFERENCES

1. Sleisenger MH, Fordtran JS: *Gastrointestinal Disease*. Philadelphia, WB Saunders Co, 1978, p 1029.
2. Thorn GW: *Harrison's Principles of Internal Medicine*. New York, McGraw-Hill Book Co, 1977, vol 2.
3. Margulis AR, Burhenne HJ: *Alimentary Tract Roentgenology*. St. Louis, CV Mosby Co, 1973, vol 1, p 474.
4. Margulis AR, Burhenne HJ: *Alimentary Tract Roentgenology*. St. Louis, CV Mosby Co, 1973, vol 2, p 851.

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CYCLAPEN®-W (cyclacillin)

Indications

Cyclacillin has less *in vitro* activity than other drugs in the ampicillin class and its use should be confined to these indications: Treatment of the following infections:

RESPIRATORY TRACT

Tonsillitis and pharyngitis caused by Group A beta-hemolytic streptococci
Bronchitis and pneumonia caused by *S. pneumoniae* (formerly *D. pneumoniae*)
Otitis media caused by *S. pneumoniae* (formerly *D. pneumoniae*) and *H. influenzae*
Acute exacerbation of chronic bronchitis caused by *H. influenzae**

*Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to *H. influenzae*.

SKIN AND SKIN STRUCTURES (integumentary) infections caused by Group A beta-hemolytic streptococci and staphylococci, non-penicillinase producers.

URINARY TRACT INFECTIONS caused by *E. coli* and *P. mirabilis*. (This drug should not be used in any *E. coli* and *P. mirabilis* infections other than urinary tract.)

NOTE: Perform cultures and susceptibility tests initially and during treatment to monitor effectiveness of therapy and susceptibility of bacteria. Therapy may be instituted prior to results of sensitivity testing.

Contraindications Contraindicated in individuals with history of an allergic reaction to penicillins.

Warnings Cyclacillin should only be prescribed for the indications listed herein.

Cyclacillin has less *in vitro* activity than other drugs of the ampicillin class. However, clinical trials demonstrated it is efficacious for recommended indications.

Serious and occasional fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin. Although anaphylaxis is more frequent following parenteral use, it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with history of sensitivity to multiple allergens. There are reports of patients with history of penicillin hypersensitivity reactions who experienced severe hypersensitivity reactions when treated with a cephalosporin. Before penicillin therapy, carefully inquire about previous hypersensitivity reactions to penicillins, cephalosporins and other allergens. If allergic reaction occurs, discontinue drug and initiate appropriate therapy. Serious anaphylactoid reactions require immediate emergency treatment with epinephrine. Oxygen, I.V. steroids, airway management, including intubation, should also be administered as indicated.

Precautions Prolonged use of antibiotics may promote overgrowth of nonsusceptible organisms. If superinfection occurs, take appropriate measures.

PREGNANCY: Pregnancy Category B. Reproduction studies performed in mice and rats at doses up to 10 times the human dose revealed no evidence of impaired fertility or harm to the fetus due to cyclacillin. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, use this drug during pregnancy only if clearly needed.

NURSING MOTHERS: It is not known whether this drug is excreted in human milk. Because many drugs are, exercise caution when cyclacillin is given to a nursing woman.

Adverse Reactions Oral cyclacillin is generally well tolerated. As with other penicillins, untoward sensitivity reactions are likely, particularly in those who previously demonstrated penicillin hypersensitivity or with history of allergy, asthma, hay fever, or urticaria. Adverse reactions reported with cyclacillin: diarrhea (in approximately 1 out of 20 patients treated), nausea and vomiting (in approximately 1 in 50), and skin rash (in approximately 1 in 60). Isolated instances of headache, dizziness, abdominal pain, vaginitis, and urticaria have been reported. (See WARNINGS) Other less frequent adverse reactions which may occur and are reported with other penicillins are anemia, thrombocytopenia, thrombocytopenic purpura, leukopenia, neutropenia and eosinophilia. These reactions are usually reversible on discontinuation of therapy.

As with other semisynthetic penicillins, SGOT elevations have been reported.

As with antibiotic therapy generally, continue treatment at least 48 to 72 hours after patient becomes asymptomatic or until bacterial eradication is evidenced. In Group A beta-hemolytic streptococcal infections, at least 10 days' treatment is recommended to guard against risk of rheumatic fever or glomerulonephritis. In chronic urinary tract infection, frequent bacteriologic and clinical appraisal is necessary during therapy and possibly for several months after. Persistent infection may require treatment for several weeks.

Cyclacillin is not indicated in children under 2 months of age. **Patients with Renal Failure** Cyclacillin may be safely administered to patients with reduced renal function. Due to prolonged serum half-life, patients with various degrees of renal impairment may require change in dosage level (see DOSAGE AND ADMINISTRATION in package insert).

Dosage (Give in equally spaced doses)

INFECTION	ADULTS	CHILDREN*
Respiratory Tract		
Tonsillitis & Pharyngitis	250 mg q.i.d.	body weight < 20 kg (44 lbs) 125 mg q.i.d. body weight > 20 kg (44 lbs) 250 mg q.i.d.
Bronchitis and Pneumonia		
Mild or Moderate Infections	250 mg q.i.d.	50 mg/kg/day q.i.d.
Chronic Infections	500 mg q.i.d.	100 mg/kg/day q.i.d.
Otitis Media	250 mg to 500 mg q.i.d.†	50 to 100 mg/kg/day†
Skin & Skin Structures	250 mg to 500 mg q.i.d.†	50 to 100 mg/kg/day†
Urinary Tract	500 mg q.i.d.	100 mg/kg/day

*Dosage should not result in a dose higher than that for adults. †depending on severity



ALLEN S. EDMONSON

Short Memories

Most of us who were practicing in Tennessee in 1975 have vivid memories of the "crisis" in malpractice insurance. The several commercial insurance companies from which we purchased our insurance had increased rates rapidly over a few years and in late 1974 and early 1975 many stopped renewing physician coverage or simply sent notification that they were leaving the malpractice insurance market in Tennessee. Representatives of a few companies gave advice to the legislature and the TMA as both sought to enact changes in the law to make the environment more favorable and preserve professional liability coverage. Along with the recommended reforms a law providing for a Joint Underwriting Association was enacted as an emergency measure to provide a state-operated insurance mechanism to be set up if and when insurance from commercial companies was not available for purchase for whatever reason. At this point at least one more large

company gave almost immediate notice to physicians that they were discontinuing insurance operations in Tennessee. Many of us began searching for commercial carriers from which to purchase insurance. Their refusal or inability to sell was documented by no less an authority than the Tennessee Department of Insurance which activated the Joint Underwriting Association in July, 1975, when it determined that a source for malpractice insurance no longer existed in Tennessee.

Under the state supervised JUA, the cost of insurance immediately multiplied again, but more importantly, the available coverage was limited to \$200,000, an amount which was considered inadequate by most physicians in surgical practice and by professional advisors. In response to this situation, the TMA House of Delegates in a special meeting directed that a physician-owned insurance company be set up to provide a source of malpractice insurance which could be directly controlled by Tennessee physicians. State Volunteer Mutual Insurance Company was organized and capitalized in late 1975 and early 1976 to the satisfaction of the commissioner of insurance and sold their first policies in May, 1976, when the Department of Insurance determined that there was again a market for insurance. Thus, the JUA was deactivated.

That the physicians' company has been successful, expanded coverage, maintained reinsurance with Lloyd's, stabilized insurance premiums and by 1981 returned all the contributed start-up capital to physicians is a matter of public record. SVMIC is a mutual casualty insurance company for physicians, operating under Tennessee law and Department of Insurance control and regulations, but entirely under member-policyholder control. As with the capital contributions, any profit or surplus remains by law the property of the policyholders and is not distributed to any outside commercial stockholders. Contrary to the situation that existed under the commercial companies, physicians now have the facts to behave responsibly in response to changes in the climate of malpractice litigation.

Now for the "short memories." One commercial company reentered the market in 1976 when the JUA was deactivated. While the malpractice situation stabilized under SVMIC, that company was very selective and offered to take back some of their previous policyholders, but excluded some, including one entire specialty (according to the physicians). In general they left the majority of across-the-board coverage for SVMIC. Now for the past year or two they have been aggressively pursuing Tennessee physicians with lower premiums and sweet rhetoric implying that they "never left." Some physicians are buying this proposition for a "fast buck." First, their malpractice rates have a basis that is unknown to me. Second, if you are willing to believe they would sell you insurance in 1975 just before the JUA was activated, ask the Department of Insurance why they declared that an insurance market did not exist. Or ask the innumerable physicians to whom they refused to sell. If they had sold us insurance then, we no doubt would not have had a JUA and probably not an SVMIC.

Memories must remain clear and future plans firm to maintain a malpractice insurance market which is totally owned and totally controlled by Tennessee physicians rather than outside interests. We must never again be dependent on the financial condition or business decisions of commercial insurance companies for this single vital product.

Allen S. Edmonson M.D.

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JULY, 1981

editorials

Short Memories

It is no news that people have short memories; it is in fact one of the proofs of the truth of this adage that we so often forget it. Doctors seem to have even shorter memories than most.

Just after World War II, when I was a surgical resident at Erlanger Hospital in Chattanooga, an orthopedic surgeon came there from San Diego. He would have liked to stay in California, he said, but the judicial climate was such that only Lloyd's of London would insure California's orthopedic surgeons. It cost several hundred dollars a year. Outrageous! So he had come to Ten-

nessee, where I believe malpractice insurance (we had never heard of "professional liability insurance" in those days) was something like 30 to 40 dollars a year.

A few years ago—probably as a result of the glut of hungry lawyers—everybody took to suing everybody else. It was not so bad—yet—in Tennessee. But insurance carriers, looking not at their local but at their national experience, decided professional liability insurance was a losing venture and set about getting out of the business. Suddenly there was no available coverage for doctors. Because such a situation was intolerable, the insurance commissioner in this state, as well as others, set up a pool, requiring all carriers who wrote any kind of insurance at all in the state to participate. The cost was high, because rates were set again using the national and not the local experience as a cost basis.

It was at that time that the physicians of the state got together and formed their own insurance company—the State Volunteer Mutual Insurance Company (SVMIC, for short). It was a fight to get the doctors to join. It was not cheap, as some of our colleagues had envisioned it would be, and required a capital outlay. But it was available, when nothing else was.

The other day I received a letter from the St. Paul Fire and Marine Insurance Company soliciting my business. St. Paul points out that during the crisis they never canceled a policy. What they fail to mention is that while they may have canceled no policies, they stopped writing any new ones, and new practitioners could get no insurance from them or anyone else.

Here is where your short memories come in. I am told because St. Paul's rates are lower—not a lot lower, but some—a relatively large number of our colleagues are abandoning their old reliable (reliable because it is *theirs*) SVMIC and turning to old unreliable, the commercial companies. It's not that St. Paul is dishonest. It's just that they are a business, and people do not go into business very often for purely altruistic reasons.

I am put in mind of a familiar story of the Presbyterian who said he was never afraid of flying because he would die only when his predestined time came. His Methodist friend said that was ok, he just didn't want to be on board when the pilot's time came.

It is easy to say if some of our colleagues want to take their chances with St. Paul, let them. It will serve them right when their policy is can-

celed. But I don't want to go down when *their* time comes. Without SVMIC, we *all* might.

Remember the Alamo!

J.B.T.

On Birthdays

It's a funny thing about birthdays. We have to have them, as we all have to be born sometime. Nations, too. As we get older, birthdays come to be less and less important, and we wish they didn't come around so fast, or would even go away, until we reach a certain age—I don't know yet when that age is—and then they again become very important.

Some clown commented last February that he grew up thinking George Washington was born on February 22, yet here we were celebrating his birthday on February 16. (Actually only some of us were celebrating. I was working, and I'm sure you were too. Only government employees and bankers were afforded the luxury.) George Washington was born on February 22, 1732. That will be 250 years ago come next February. TMA celebrated its sesquicentennial—i.e., 150 years—last year. Does that make 1982 George's sesquibicentennial or bisesquicentennial. or what?

Whatever it is, will anybody notice?

February 22, 1932 was the bicentennial of the birth of George Washington. I was in the fourth grade, and shortly after the school year got under way in September, 1931, we began practicing for a pageant. We learned a song, the chorus of which I still remember, and which I will quote for you later, to sing at the pageant. It may be doggerel, but it has a clear message. I will quote it even though it probably (to our national poverty) doesn't apply anymore. The postal service issued a special bicentennial stamp, and there was a parade in Chattanooga. (I'm sure there were parades all over the country.) It was some parade! I still remember it; my father believed strongly in this country, and took my brother and me to see it. As a matter of fact, the whole year of 1932 was sort of George Washington's year—but that was a less sophisticated time, when people still believed in absolute values.

Today the name Washington usually conjures up only "Disneyland on the Potomac," to quote Tom Dorrity, a city alive with bureaucrats out to eat our lunch, with legislators on the take, with nine old men rewriting the Constitution to suit their own (often wrong) biases, and, oh, yes,

dead with that emasculated public servant known as the President.

Last November the electorate gave indication it was displeased with that image of our capitol city, and set about to change it. But how about the man it was named for? In the 50 years since his bicentennial his private life has been exhumed and denigrated. He died, it is said, of quinsy contracted because the old man (he was 67!) tottered off in the cold rain to his mistress' slave cabin. A lot of other drivel has been written to derogate his memory. Anyway, so what if it is all true?

George Washington, the son of a wealthy planter, would never have had to work at all, and he married money, besides. All he ever really wanted was to stay at his beloved Mount Vernon and farm. He risked land and fortune for this new nation. He struggled through the bitter winter at Valley Forge, where only his charisma held the tattered army together. He refused to be made king when the position was offered him, and he refused to be president for longer than two terms. Contrary to his desires, he was a military and political genius who could sway men to do his bidding; yet he used none of it for personal gain. Personal gain for him would have been to retire to Mount Vernon when the war ended. He spent almost none of his life there, and Martha seldom saw him.

We may have come a long way, Baby, but I doubt it is for the better. We need to run up the Union Jack and give three for George, without whose dedication "The Fourth of July" would have been just July 4, instead of our nation's birthday. And then we need to dedicate ourselves to this nation as he did. If every man-jack (and jenny) of us did that, we would not need to be concerned about the Soviet Union, Vietnam, the national debt, taxes, inflation, the balance of trade, Sony, Toyota, Datsun, the Common Market, gold prices, the crime rate, or anything else.

Because we have not, we do.

Washington, George Washington,
Throughout our country wide,
Your honored name
Is marked with fame.
Your memory glorified.

Washington, George Washington,
This vow we take and tell:
With heart and hand
To serve the land
You served so long and well.

J.B.T.

Utopia Revisited: Unisex 1984

The "unisex" controversy has taken a new turn. . . . A proposal, approved and advocated by the Equal Employment Opportunity Commission, would have used a merged-gender mortality table for determining benefits purchased by future premiums to TIAA and CREF individual annuity contracts. . . . In California a newly effective statute results in prohibiting the use of merged-gender mortality tables for individual annuity and life insurance contracts issued in that state after January 1, 1981. And in New York, the State Insurance Department on January 27 disapproved the proposed uses of a merged-gender table for participants' TIAA and CREF annuity contracts as being "inconsistent with the requirements of the New York Insurance law." The EEOC has now filed a suit against the New York Superintendent of Insurance, charging that his action violates the Equal Pay Act, Title VII of the Civil Rights Act of 1964, and the Fourteenth Amendment of the Constitution of the United States.

—*The Participant*, March 1981
A publication of the Teachers
Insurance and Annuity Association

July 4, 1984

WASHINGTON. Health Care in the United States is a shambles, and insurance no longer exists, as the result of a Supreme Court ruling following several years of litigation through the various levels of the court system.

Some years ago, you will remember, an inspector for the Equal Employment Opportunity Commission (EEOC) reported to the Department of Justice (DOJ) that in the course of his investigations he had uncovered statistics indicating that almost all mastectomies were being done on women. He felt this to be clearly discriminatory, and several of his female colleagues assured him it was an example of brazen male chauvinism.

The DOJ took the matter under advisement, and FBI agents began a process of infiltrating hospitals to gain information. This led to an army of agents, armed with search warrants, suddenly descending upon the offices of gynecologists, obstetricians, urologists, and general surgeons demanding access to their files. The results of the investigation were the exposure of monumental violations of civil rights by hospitals and the medical profession. As many of the involved physicians and hospital personnel were women, it could not be laid to mere male chauvinism, and the consensus was therefore that it must be a conspiracy between the hospitals and medical

profession to violate the civil rights of not only women, but men as well.

Indictments were therefore issued on the following counts:

- Women are subjected to almost all hysterectomies.
- Virtually every prostatectomy is done on men.
- As previously discovered, the overwhelming majority of mastectomies, breast biopsies, and even mammographic studies, are done on women.
- Labor and delivery rooms are being used almost exclusively for the benefit of women.
- Vasectomies are done on men and tubal ligations on women, to the exclusion of the opposite sex.
- And finally, only women are receiving abortions.

As collusion with felonious intent was considered proved, the DOJ filed thousands of lawsuits with billions of dollars in punitive damages attached. Judges issued restraining orders demanding that the inequities be resolved. Pending appeals through the courts, everything has been in abeyance, and physicians and hospitals have been conducting business as usual—until last week.

Last week the appeals reached the Supreme Court, which decided in favor of the plaintiffs, to wit: That the civil rights of virtually every man, woman, and child (since pediatricians were treating mostly children, and mostly in children's hospitals) were being abridged, with reckless disregard for the 14th Amendment.

The result, of course, is chaos. All babies are now being delivered at home by midwives, who remain anonymous and travel about only at night, lest they too be arraigned for violating the civil rights of men. Hospitals with any sizable obstetrical and pediatric services are in dire financial straights because of punitive damages leveled against them. Every general insurance company in the United States is bankrupt. Physicians—those not in jail—have locked up their offices and gone fishing. Family planning clinics have closed.

And finally, coat-hanger manufacturers have struck oil.

So have the dons, since the federal agencies, the law enforcement officers, and the court system are all occupied, as is their wont, with trivia.

J.B.T.



Prevalence of Rubella Susceptibility at First Prenatal Visit

To the Editor:

Despite the availability of immunization, susceptibility to rubella persists. Shlian¹ screened 481 women aged 14 to 35 and discovered that 33% were susceptible to rubella (rubella hemagglutination-inhibition [HI] titer less than 1:8). A survey by Lawless et al² revealed that 15% of sixth grade students demonstrate a rubella HI titer less than 1:8. This communication reports the prevalence of rubella susceptibility among primarily indigent women at time of the initial prenatal visit.

Records were reviewed of 4,093 women who were delivered between Jan. 1, 1980 and Dec. 31, 1980. A patient was considered susceptible to rubella if the titer was less than 1:8 or if passive hemagglutination was less than 13.5. Five hundred and forty-nine patients (13.4%) were susceptible to rubella.

Thirteen percent susceptibility to rubella, as demonstrated in this survey, confirms persistence of the rubella problem. In the prevaccine era the highest attack rate was among children age 5 to 9. Now the highest rate occurs between 15 to 19 years of age with 70% of cases occurring at 15 years or older.³ It appears that rubella cases are occurring primarily in previously unvaccinated individuals. It is important to remember that at least one half of rubella infections are subclinical. Subclinical rubella is as great a threat to the fetus as is clinically recognizable infection.

Physicians who practice obstetrics must remain aware of the rubella threat. Prenatal screening for rubella immunity is mandatory. Sequential screening for detection of recently acquired antibodies in early pregnancy should be considered. The responsibility of premarital and postpartum immunization is now primarily delegated to those who practice obstetrics.

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REFERENCES

1. Shlian DM: Screening and immunization of rubella—susceptible women: Experience in a large prepaid medical group. *JAMA* 240:662-663, 1978.
2. Lawless MR, Abramson JS, Harlan JE, et al: Rubella susceptibility in sixth graders: Effectiveness of current immunization practice. *Pediatrics* 65:1086-1089, 1980.
3. *Mortal Morbid Weekly Rep* 29:378-380, 1980.

What Price "Hanky Panky"?

To the Editor:

When I was a high school student, by virtue of the fact I was "making a doctor," as my grandmother quaintly stated, I was ushered to the farmhouse attic to read dusty musty ole medical books of several generations back. Irrespective of the disease, the final cause catalogued for all was "a bad marriage." What a relief it was to discover bacteria as a cause of illness. The biochemistry of disease tickled my fancy. However, after ten years of practice I have come to appreciate the wisdom of the ages.

The family and parenting appear to be the key factors in the prevention of (1) juvenile delinquency, (2) arson, (3) child abuse, (4) drug abuse, (5) violence. The family also appears to be important in overcoming the risk factors in heart disease and thus survival to a ripe old age.

In the article "Statewide Family Planning Program in Tennessee," Dr. Campbell et al¹ describe our \$8.8-million program "to build a dam across a tributary without plugging the dike." Thus as in our so-called system of justice, we in medicine are developing a self-perpetuating mushrooming system of public health approaches to each tributary, i.e., venereal disease, birth control, abortion, which may facilitate the development of future problems. This system attacks the problem after it exists. Is this prevention? Should we not plug the dike before mopping the spill?

Some traps into which our adolescents fall appear to have absolutely minimum chance for cure, i.e., obesity, smoking, alcoholism, or drug abuse. While sexual activity is physiologically normal, once established it too is a normal part of one's life seldom discontinued. Therefore effective prevention has to come before the fact and not after.

In our puritanical days about 20% of adolescents were sexually active. Then we got practical and allowed individuals to pursue the correct course for their lives, merely providing information to prevent pregnancies. Thus we have experienced an increase in sexually active adolescents (1967, 44%; 1976, 55%; 1979, 76%),² an increase in the now 28 types of venereal diseases, an increase in social problems, i.e., divorce (50% in '78, 65% in '80), crime, drug abuse, etc. This does not appear so effective to me and I wonder if, after nine years, we as a population should not do some rethinking about these problems and our approach. Was the puritanical approach all that bad? Have we as a population submitted ourselves to one logic, as did the Nazi?

Obviously, the decision to be sexually active is not only a moral question. Good preventive medicine and good preventive law demand that we intervene prior to the event, not afterward. To prevent these important medical and legal problems, we must impress upon our pre-teen population the absolute necessity of sexual abstinence—the safe method—until they es-

establish a good family after 19 years of age. Our alternative is to buy the new burglar proof locks, to expand our programs for the mentally retarded, and to build bigger jails. The individual avoids increased risk of (1) social problems with their peers and parents, (2) interruption of their education, (3) all 28 types of venereal disease with potential sequelae, (4) the large \$6,000-\$22,000 hospital bills for their premature child, (5) complications of contraception, i.e., the pill—fivefold increase in thrombophlebitis, migraine headaches, heart attacks, and strokes and the threefold increase in cancer of the breast with high estrogen pills. As a population we should see decreasing numbers of premature infants, fewer juvenile delinquents, and thus probably fewer criminals, fewer persons abusing children, fewer children spaced out on drugs, and fewer episodes of arson. This would appear to be billions of dollars—the price of “Hanky Pank.”

All the medical literature seems bent on teaching adolescents about contraception. Is this really family planning? Should we not critically evaluate the results of better preparing each child for family life? Because kids seem to accept adult suggestions up to about the seventh grade, should each child not be an expert in those skills needed in family life by age 13? For example: (1) parenting, (2) budget management, (3) debating techniques, (4) characteristics of an unstable personality, (5) factors which predict a poor marriage result, (6) social responsibility. Would this not develop a more stable population? Just who is naive?

William M. Hicks, M.D.
106 Indian Hills Dr.
Clinton, TN 37716

REFERENCES

1. Campbell B, Atrash HK, Allen DT, et al: Statewide family planning program in Tennessee—A 1980 update. *J Tenn Med Assoc* 73:629-637, 1980.
2. McAnarney ER, Greydanus DE: Adolescent pregnancy—A multifaceted problem. *Pediatrics in Review* 1:123, 1980.

“Doctor of the Day”

To the Editor:

I would like to report on my experience as “Doctor of the Day” for the State Legislature on Thursday 19 March. It was enlightening, enjoyable, and, I think, not unproductive—one all of us should enjoy. I was honored on the floor of the House. I met and shook hands with nearly all of the representatives and a number of senators. I found these people to be hard working, sincere, friendly and anxious to do a good job.

Don Dills, our local representative, is one of my very best friends. I had promised him that I would come to visit him during the legislative session. I went to Nashville on Wednesday evening and registered at his motel. We then went over to the West Tennessee caucus room where I was introduced to

several representatives and spoke with several others who I already knew. I had the pleasure of having dinner with Representative Dills, his wife and Representative Crain from Ripley.

My day began rather early on Thursday, 6:30 a.m. We had a continental breakfast and went directly to the Legislative Plaza. I couldn't believe all the activity I encountered so early in the morning. I had a very pleasant visit with Speaker McWherter in his office. Then I had the opportunity to visit other offices and meet other legislators.

During the session I spent my time mingling with the representatives on the floor. When I had a patient to see, the sergeant at arms gave me notice.

Now let me relay some of my impressions of the whole affair. I got the feeling that some of the legislators think doctors want to control everything. A lot of them think the doctor is more interested in his pocketbook than the welfare of his patients. Some feel that the doctor is too aloof, reserved or sophisticated to communicate with them. They are impressed by education. In fact, one argument for the optometrists was that they went to college and then spent four more years studying nothing but the eye. My answer was, “They should have gone to medical school if they want to practice medicine.” Also, I got the feeling that a letter to a legislator from a person he doesn't know is not too effective.

Now I'd like to offer a few suggestions. The contact doctor might be more effective if he invited his representative to dinner and cultivated his friendship. At the beginning of the session, the TMA could have a reception with cocktails and hors d'oeuvres for the legislators with as many physicians there as possible. The “Doctor of the Day” might spend the night before or the night after his duty there socializing with and meeting as many people as possible. He might tour the Legislative Plaza and visit as many offices as possible before the session begins, letting everyone know he's here and who he is. These people appreciate our being there.

Walter E. David, M.D.
503 Tickle
Dyersburg, TN 38024



William Daniel Rosborough, age 84. Died April 4, 1981. Graduate of University of Pennsylvania School of Medicine. Member of Rutherford County Medical Society.

Joseph Edgar Young, age 75. Died April 25, 1981. Graduate of University of Virginia School of Medicine. Member of Monroe County Medical Society.

new members

The JOURNAL takes this opportunity to welcome these new members to the Tennessee Medical Association.

CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY

Anita Madria Boiser, M.D., Chattanooga
John F. Farr, M.D., Chattanooga
Frank J. Miller, M.D., Chattanooga
Melvin Alvin Wade, M.D., Decatur

CONSOLIDATED MEDICAL ASSEMBLY OF WEST TENNESSEE

Kandala Ram Chary, M.D., Jackson
Robert H. Dunnebacke, M.D., Jackson
Jere D. Hammond M.D., Jackson

KNOXVILLE ACADEMY OF MEDICINE

John W. Lacey, III, M.D., Knoxville
Ronald N. Maclean, M.D., Knoxville
Mohammed A. Nayeem, M.D., Knoxville
Michael L. Pool, M.D., Knoxville

MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

Charles D. Akins, M.D., Memphis
Alan M. Alabaster, M.D., Memphis
James E. Boone, M.D., Memphis
David Newton Collins, M.D., Memphis
James K. Ensor, M.D., Germantown
John Newton Gillespie, M.D., Memphis
Robert Bryson Irwin, M.D., Memphis
Ernest Bobby Kleier, Jr., M.D., Memphis
Hubert Lynn Magill, M.D., Memphis
James F. Mayhew, M.D., Memphis
Marie L. Michelson, M.D., Memphis
Joseph Bayard Miller, M.D., Memphis
William F. Outlan, M.D., Collierville
Mohanlal L. Patel, M.D., Memphis
N. V. Raghavaiah, M.D., Memphis
Cheston Murray Reed, Jr., M.D., Memphis
Alanson R. Spalding, M.D., Memphis
Mary Frances Werner, M.D., Memphis

NASHVILLE ACADEMY OF MEDICINE

Bruce E. Jones, M.D., Nashville
Courtney Shands, III (student), Nashville
Anthony E. Trabue, M.D., Nashville

PUTNAM COUNTY MEDICAL SOCIETY

Laykoon Tan Huang, M.D., Cookeville
Louis F. Vossell, Jr., M.D., Cookeville

WASHINGTON-CARTER-UNICOI COUNTY MEDICAL ASSOCIATION

Louis A. Cancellaro, M.D., Johnson City
James M. Pearson, M.D., Johnson City

TMA Members Receive AMA Physician's Recognition Award

Twenty-one TMA members qualified for the AMA Physician's Recognition Award during April, 1981.

To qualify for the PRA, a minimum of 150 hours of continuing medical education must be earned over a three-year period; 60 of these hours must be Category 1.

This list does not include members who reside in other states. Names of additional PRA recipients will be published as they are received from AMA.

Venkata R. R. Baredy, M.D., Chattanooga
James S. Bell, M.D., Memphis
Ralph L. Brickell, M.D., Tullahoma
Kenneth W. Carr, M.D., Martin
Joseph F. Colligan, M.D., Knoxville
James H. Donnell, M.D., Jackson
Theodore A. Feintuch, M.D., Chattanooga
Clifton E. Greer, M.D., Nashville
Robert J. Gubler, M.D., Johnson City
Atef A. Ibrahim, M.D., Elizabethton
John W. Laramore, M.D., Chattanooga
James J. Madden, M.D., Nashville
William C. McAfee, M.D., Jackson
Haskell B. McCollum, M.D., Greeneville
Edwin H. Mitchell, M.D., Nashville
V. Tupper Morehead, M.D., Clarksville
Richard P. Ownbey, M.D., Nashville
Charles J. Ray, M.D., Chattanooga
Alvin B. Rosenbloom, M.D., Nashville
Harvey S. Sanders, M.D., Nashville
Richard J. Sanders, M.D., Nashville

personal news

Cleland Blake, M.D., Morristown, has been appointed Tennessee's assistant chief medical examiner.

William F. Buchner, M.D., Chattanooga, has been elected to the office of president-elect of the Tennessee Chapter of the American College of Surgeons.

Claude H. Crockett, Jr., M.D., Bristol, has been inducted as a Fellow of the American Society for Head and Neck Surgery.

Samuel T. Fain, M.D., and Frank Milligan, M.D., both of Jefferson City, were honored at a breakfast at the Jefferson Memorial Hospital and were given

plaques "in appreciation for over 50 years of dedicated service to humanity through the practice of medicine."

Rudolph H. Kampmeier, M.D., Nashville, has been honored with the American College of Physicians' Ralph O. Claypoole memorial award.

The following TMA members have been inducted as Fellows of the American College of Physicians: *Edwin Edwards, M.D.*, Jackson; *Yune-Gill Jeong, M.D.*, Chattanooga; and *Robert H. Jernigan, M.D.*, Kingsport.

medical news in tennessee

Liddle Elected to the National Academy of Sciences

Grant Liddle, M.D., professor and chairman of the Department of Medicine at Vanderbilt University School of Medicine, has been elected to the National Academy of Sciences on the basis of his distinguished and continuing achievements in original research.

Dr. Liddle, who joined the medical school faculty in 1956, has earned international recognition for his pioneering research in clinical endocrinology. Among his notable accomplishments are developing tests for pituitary-adrenal gland function, identifying treatment for Cushing's syndrome, the discovery and delineation of ectopic ACTH syndrome (ACTH is a chemical produced by the pituitary gland), and the discovery that ACTH is also produced by some cancers.

Texas Doctor Will Head ETSU Medical School

Herschel L. Douglas, M.D., head of the Department of Family Practice at the University of Texas Health Science Center in San Antonio, has been named dean of the East Tennessee State University's Quillen-Dishner College of Medicine. The new dean will assume his position on the ETSU campus about August 15.

Dr. Douglas practiced in Lea County, New Mexico for eight years before joining the Department of Medicine at Texas in 1971. He received his Doctor of Medicine degree at the University of Oklahoma School of Medicine in 1960 and completed his internship in the U.S. Public Health Service in New Orleans. He practiced in New Mexico from 1961-1965 and again from 1968-1971. He also served for three years as chief medical officer for the U.S. Agency for International Development in Vietnam.

national news

From the AMA's Office in Washington, D.C.

Administration Wins Budget Victory

Within a span of seven days in May the administration achieved an historic triumph in Congress, with the House and then the Senate approving budget resolutions to cut federal spending by more than \$40 billion.

The serious opposition to the economy drive came in the house where the Democratic leadership made a party issue of a substitute budget plan that would not have cut so deeply. More than \$2 billion of health program reductions would have been restored under the Democratic budget, but the Republican plan hewing to the administration's lower levels easily prevailed, 253 to 176.

The Senate followed suit the following week with a budget resolution tailored to the administration's specifications. A conference committee has ironed out the relatively minor differences between the two measures.

Only 18 Democrats and two Republicans resisted the economy wave in the Senate as the administration plan sailed through 78 to 20. Among those voting for the measure was Senate Democratic leader Robert Byrd (D-W.Va.). Senate Budget Committee Chairman Pete Domenici (R-N.M.) said the vote "clearly indicates the Senate is prepared to change its spending habits. . . . Over the long run we have started a trend toward fiscal sanity."

Before the final vote, the Senate buried, 81 to 17, a proposal by Sen. Donald Reagle (D-Mich.) to pare defense spending by \$2 billion and increase social program spending the like amount.

As a result of the actions, the committees of Congress are now forced to review their legislative agendas to decide where programs must be cut in order to conform to the spending ceilings imposed by the resolution.

The Democratic budget plan that foundered in the House would have forestalled the two major reductions in health sought by the administration—the 5% "cap" on federal Medicaid contributions next fiscal year and the block grant, 25% funding cut plan for Public Health Service categorical grant programs. The alternate budget also proposed continuation of two health programs marked by the administration for phasing out—health planning and professional standards review organization (PSRO).

The Senate Finance Committee, moving to cut pro-

grams within its jurisdiction, approved major changes in health programs. The committee voted to cut Medicaid spending next fiscal year by \$800 million by reducing the federal minimum contribution to the states to 40% from the present 50%. At the same time, the cap on increased federal outlays for the program was lifted to 9%.

The committee also raised the Medicare Part B deductibles and premiums, reduced the Medicare nursing differential from the present 8.5% to 4.5%, and made retired federal employees' private health insurance pick up the tab first before Medicare kicked in. Some \$1.2 billion of Medicare spending would be saved.

The House Ways and Means Health Subcommittee is considering similar legislation.

The House budget vote was preceded by intense lobbying by both sides. Democratic committee chairmen warned in House speeches that the House's hands would be tied to the Reagan economies for the rest of the year, if the President's plan were approved.

Reagan met personally with most of the Democrats who finally voted his way. The 63 bolting Democrats provided an easy win for the administration as they joined all Republican members of the House.

Administration Proposes Medicare Changes

The administration has sent Congress its formal recommendations for changes in Medicaid and Medicare, including the "cap" of 5% on federal Medicaid outlays aimed at saving \$1 billion next fiscal year.

The federal ceiling would be about \$17 billion next fiscal year. In the future the limit would be allowed to rise with the rate of inflation. The cap is necessary to control Medicaid costs, the administration said.

"With the flexibility available through the administration's proposed revisions in program requirements, cost restraint can be achieved by the states without reducing necessary services for the needy. The states would be able to design programs which will provide for health care delivery in much more economical and efficient ways," said the Health and Human Services (HHS) Department in a statement.

The most controversial of the recommendations would repeal the freedom of choice requirement in present law which gives Medicaid beneficiaries the right to choose their facility or physician. This would be replaced by a requirement "to provide standards that afford medical care of adequate quality." HHS said this change would allow states "to effect significant cost savings while maintaining quality care, for example, by soliciting competitive bids for provision of covered services."

In addition, all federal requirements on the amount

and method of reimbursement of providers would be eliminated. This includes the present requirements for reimbursement of inpatient hospital services as well as "barriers in the law to reimbursement based on fee schedules." Provisions which "have restricted the use of health maintenance organizations" in providing Medicaid care were lifted.

The legislation calls for a phase-out of the "costly and burdensome" professional standards review organization (PSRO) activities for both Medicaid and Medicare. "Effective PSROs would be supported until 1983. States would have discretion to determine the most appropriate form of review and to set up state utilization review requirements. Effective PSROs would be able to compete for state or private contracts within the health care system."

Eliminated would be federal requirements for hospital and nursing home utilization review plans and committees. PSRO agreements could be terminated on 90 days' notice without formal hearing or judicial review. State PSRO coordinating councils would be ended.

The legislative changes in Medicare were less controversial but were intended to save about the same amount of money—\$1 billion. Private health insurance companies, including Blue Cross-Blue Shield, would be affected by a proposal to phase in over a five-year period competitive bidding for award of contracts for claims processing. Medicare would be allowed to contract with any public or private organization for claims processing. HHS contended incentives for efficiency and economy don't exist under the present noncompetitive bidding structure and anticipated savings of some \$120 million a year by 1985.

Other proposed Medicare changes: new civil financial penalties for provider fraud and abuse and ability to bar offenders from participating in the program; elimination of the higher rate of reimbursement for routine nursing care for Medicare patients; reducing or eliminating relatively minor benefit expansions adopted by Congress last year, including outpatient alcohol detoxification and outpatient rehabilitation facilities and unlimited home health service visits; elimination of federal end-stage renal disease networks.

Health Planning Act Poops

The Health Planning Act "is ill conceived, beyond salvage and must be repealed," the American Medical Association has told the National Council on Health Planning and Resources Development.

Since its inception, the planning program has not been responsive to local needs and circumstances, the Council was told by Lonnie Bristow, M.D., a member of the AMA Council on Medical Service. Planning has developed into a "bureaucratic maze of

plans, applications and red tape that unduly delayed the development of needed projects and substantially increased individual project costs," Dr. Bristow told the meeting, conducted by HHS.

Urging repeal of the program, which the Reagan administration has proposed phasing out, Dr. Bristow said planning has inhibited market forces needed to strengthen competition in the health care marketplace and "represents the antithesis of a free market system by establishing barriers to free entry by qualified providers in the marketplace."

The AMA official said the Association is committed to seek improvements in the health care delivery system through a voluntary system that will reduce or eliminate barriers to the provision of high-quality medical and health services. Dr. Bristow called for a collaborative effort at the community level.

Legislation to repeal the Health Planning Law has been introduced in Congress by Reps. Richard Shelby (D-Ala.) and Phil Gramm (D-Tex.).

The repeal legislation was strongly supported by the AMA which said repeal "is absolutely necessary to end federal interference in local planning decisions."

Noting that an end to funding, as the administration recommends, does not end the federal requirement that states enact conforming certificate-of-need laws, the AMA said flat repeal won't be an easy task.

Listing its objections to the program in a "legislative alert" statement, the AMA said planning imposes federal regulations upon what should be primarily locally directed health planning. The program is not cost-effective and is anticompetitive, "creating barriers to market entry through burdensome certificate-of-need and other approval requirements," the AMA said.

The highly complex law and regulations cause "excessive" time and resources devoted to red tape instead of delivery of care, the AMA said.

Smoking Struck By FTC

People don't realize the health hazards of smoking, the Federal Trade Commission staff has said in a report to Congress.

The report mentions a number of options that might be taken to alert the public, including increasing consumer education, making the current warning label on cigarette packages and ads larger and/or more specific, requiring different warnings at different times, starting an industry self-regulation program.

The staff report, which leaves it up to Congress what steps to take, concludes that the evidence accumulated over the past two decades establishes that cigarette smoking is more dangerous than was thought in 1964 when the first Surgeon General's report was issued. Present warning requirements apparently do not educate the public on the dangers, the report said.

AMA Hits VA Pay Cut

Legislation to limit special pay for Veterans Administration physicians and dentists has been opposed by the AMA. Passage "would definitely have an adverse impact upon the ability of the VA to recruit and retain adequate physician staff," the AMA said in a letter to the Senate Veterans' Affairs Committee. The measure before the Committee would allow only 12% of the total appropriation for VA physician and dentist pay to be expended for special pay.

"The AMA firmly believes that all physicians in federal employ should receive an equitable and comparable salary and benefits," and the bill "would be a step away from this goal," said AMA Executive Vice President James Sammons, M.D.

announcements

CALENDAR OF MEETINGS

NATIONAL

Sept. 12-15	American College of Radiology, Caesar's Palace, Las Vegas
Sept. 14-15	American College of Nutrition, Marriott Hotel, Bethesda, Md.
Sept. 14-16	American Neurological Association — Hyatt Regency, San Francisco
Sept. 14-17	American College of Emergency Physicians — Marriott Hotel, New Orleans
Sept. 16-19	American Thyroid Association — Sheraton Ritz, Minneapolis
Sept. 17-19	American Paraplegia Society Symposium on Spinal Cord Injury Medicine — Sheraton St. Louis Inn, St. Louis
Sept. 18-19	AMA Medical Staff Leadership Seminar — The Drake, Chicago
Sept. 20-24	American Academy of Otolaryngology — Head and Neck Surgery — New Orleans
Sept. 21-24	American Academy of Family Physicians — Hilton Hotel, Las Vegas
Sept. 23-25	Clinical Orthopaedic Society — Kahler Hotel, Rochester, Minn.

STATE

Sept. 17-18	Southern Medical Association Medical Staff Leadership Conference — Hyatt Regency, Nashville
Sept. 21-22	Tennessee Valley Medical Assembly — Chattanooga Choo Choo

The continuing medical education accreditation program of the TMA has full approval by the Accreditation Council for Continuing Medical Education. An accredited institution or organization may designate for Category 1 credit toward the AMA Physician's Recognition Award those CME activities that meet appropriate guidelines. If you wish information as to how your hospital or society may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203.

IMPORTANT NOTICE

Published in this section are all educational opportunities which come to our attention which might be of interest to our membership. As some of these are very long, full year schedules, and others are detailed descriptions of courses, in order to conserve space, most of them will be published in only one issue of the Journal.

IN TENNESSEE

VANDERBILT UNIVERSITY

Clinical Training Program

Opportunities for advanced clinical education for physicians in family practice and in various subspecialties have been developed by the School of Medicine and the Division of Continuing Education of Vanderbilt University. The practicing physician, with the guidance of the participating department chairman, can plan an individualized program of one to four weeks to meet recognized needs and interests. The experience will include contact with patients, discussion with clinical and academic faculty, conferences, ward rounds, learning individual procedures, observing new surgical techniques, and access to excellent library resources. Experience in more than one discipline may be included.

Participating Departments and Divisions

Allergy & Immunology	Samuel Marney, M.D.
Anesthesiology	Bradley E. Smith, M.D.
Cardiology	Gottlieb C. Friesinger, III, M.D.
Chest Diseases	James D. Snell, M.D.
Clinical Pharmacology	John A. Oates, M.D.
Dermatology	Lloyd King, M.D.
Diabetes	Oscar B. Crofford, M.D.
Endocrinology	David Rabin, M.D.
	David N. Orth, M.D.
Gastroenterology	Steven Schenker, M.D.
General Internal Medicine	W. Anderson Spickard, M.D.
Hematology	Sanford B. Krantz, M.D.
Infectious Diseases	Zell A. McGee, M.D.
Medicine	Grant W. Liddle, M.D.
Neurology	Gerald M. Fenichel, M.D.
Obstetrics & Gynecology	Lonnie S. Burnett, M.D.
Oncology	Robert Oldham, M.D.
Orthopedics	Paul W. Griffin, M.D.
Pathology	William H. Hartmann, M.D.
Pediatrics	David T. Karzon, M.D.
Psychiatry	Marc H. Hollender, M.D.
Radiology	A. Everette James, Jr., Sc.M., J.D., M.D.
Renal Diseases	H. Earl Ginn, M.D.
Rheumatology	Theodore Pincus, M.D.
Surgery	
Cancer Chemotherapy	Vernon H. Reynolds, M.D.
General	H. William Scott, Jr., M.D.
Neurological	William F. Meacham, M.D.
Ophthalmology	James H. Elliott, M.D.
Oral	H. David Hall, D.M.D.

Pediatric	James A. O'Neill, M.D.
Plastic	John B. Lynch, M.D.
Renal Transplantation	Robert E. Richie, M.D.
Thoracic & Cardiac	Harvey W. Bender, M.D.
Urology	Robert K. Rhamy, M.D.

Eligibility: All licensed physicians are eligible. **Administrative Fee:** \$200 per week. **Credit:** AMA Physician's Recognition Award (Category 1) and AAFP Continuing Education Accreditation. **Application:** For further information and application, contact Paul E. Slaton, M.D., Director, Continuing Medical Education, Vanderbilt University Medical Center, Nashville, TN 37232, Tel. (615) 322-2716.

Continuing Education Schedule

Sept. 17-19	3rd National Frontiers in Nutrition Conference—Hilton Head, S.C.
Sept. 18-19	12th Annual Pediatrics Symposium: Immunology and Allergy
September	Blood Banking: Recent Medical and Technical Advances
October	J. William Hillman Visiting Professor in Orthopedics
Oct. 1-4	3rd Annual Medical Alumni Symposium
Oct. 28-30	Robert M. Buchanan Lecturer in Dermatology
Oct. 29-31	Update in Therapeutic Decision-Making (ACP Regional Meeting Scientific Sessions)
November	Annual Rhamy-Shelley Lectureship in Urology
November	Update in Anesthesiology
Dec. 4-5	High Risk Obstetrics Seminar and the Everett M. Clayton Memorial Lecture (10 hours)

For information contact Division of Continuing Medical Education, Vanderbilt School of Medicine, Nashville, TN 37232, Tel. (615) 322-2716.

MEHARRY MEDICAL COLLEGE

Extended Continuing Education Program

Arrangements have been made with the following services and departments in the medical school to allow practicing physicians to participate in that service's activities for a period of one to four weeks. This program provides an opportunity for physicians to study in depth for a specified period. The schedule of activities is individualized in response to the physician's request by the participating department. The experience includes conferences, ward rounds, audiovisual materials and contact with patients, residents and faculty.

Participating Departments

Anesthesiology	Ramon S. Harris, M.D.
Family Practice	John Arradondo, M.D.
Internal Medicine	
Cardiology	John Thomas, M.D.

	Kermit R. Brown, M.D.
	Qamar A. Kahn, M.D.
Chest Disease	Joseph M. Stinson, M.D.
	Paul A. Talley, M.D.
	Edward A. Mays, M.D.
Dermatology	Thomas W. Johnson, M.D.
	David Horowitz, M.D.
Gastroenterology	Ludwald O. P. Perry, M.D.
	Buntwal M. Somayaji, M.D.
General Medicine	Edward A. Mays, M.D.
Hematology/Oncology	Robert S. Hardy, M.D.
Neurology	Calvin L. Calhoun, Sr., M.D.
	Gregory Samaras, M.D.
Obstetrics & Gynecology	Henry W. Foster, M.D.
Ophthalmology	Axel C. Hansen, M.D.
Orthopedics	Wallace T. Dooley, M.D.
Pathology	Louis D. Green, M.D.
	John C. Ashhurst, M.D.
Pediatrics	E. Perry Crump, M.D.
Surgery	
General	Louis J. Bernard, M.D.
Neurological	Charles E. Brown, M.D.
Thoracic and Cardiovascular	David B. Todd, M.D.
	Ira D. Thompson, M.D.
Urology	Marcelle R. Hamberg, M.D.

Fee: \$100 per week. **Credit:** AMA Physician's Recognition Award (Category 1), AAFP Continuing Education Accreditation, and Continuing Education Units by Meharry Medical College. **Application:** For further information contact Frank A. Perry, Sr., M.D., Director, Continuing Education, Meharry Medical College, 1005 18th Ave. North, Nashville, TN 37208, Tel. (615) 327-6235.

EAST TENNESSEE STATE UNIVERSITY

Aug. 15	Stress in Medical Practice
Sept. 19	Advances in Laboratory Medicine
Oct. 7-9	Infection Control
Oct. 16	Pediatrics Prep III: Neonatology
Nov. 2-6	CPR: Faculty Inservice

For information contact Office of Continuing Medical Education, East Tennessee State University, Quillen-Dishner College of Medicine, Johnson City, TN 37614, Tel. (615) 928-6426, ext. 204.

UNIVERSITY OF TENNESSEE

Continuing Education Schedule

This comprehensive listing of UTCHS courses includes programs of the Chattanooga, Knoxville, and Memphis units. The codes (C), (K), and (M) indicate the continuing education unit handling the arrangements for a particular program.

Aug. 12-15	(C)	Emergencies in Obstetrics and Gynecology — Gatlinburg
Sept. 11	(M)	Practice Management
Sept. 11-12	(K)	A Workshop on Handicapped Child — Gatlinburg
Sept. 12	(K)	Practice Management
Sept. 17-18	(M)	13th Annual Conference on Mother, Fetus and Newborn
Sept. 21-22	(C)	Practical Skills in Diagnosis and Treatment of Disease
Oct. 3-4	(M)	Ultrasound: A Primer for the Beginner
Oct. 15-17	(K)	2nd Annual Seminar in Obstetrics and Gynecology
Oct. 22-23	(M)	Medical Alumni Days
Oct. 25-27	(K)	Cancer Concepts 1981
Nov. 13	(K)	Internal Medicine

Community-Based CME

Knoxville Campus

Blount Memorial Hospital; Maryville, Tenn.
Every Tuesday; 7-8 a.m. (1 hr. credit)

Jellico Hospital; Jellico, Tenn.
Monthly, third Tuesday; 7-9 p.m. (2 hrs. credit)

Morristown-Hamblen County Hospital; Morristown, Tenn.
Alternate months, third Tuesday; 6:30-8 p.m. (1.5 hrs. credit)

Sweetwater Community Hospital; Sweetwater, Tenn.
Monthly, second Wednesday; 12:00 noon (1 hr. credit)

Takoma Hospital; Greeneville, Tenn.
Monthly, dates vary; 6:30 p.m. (1-2 hrs. credit)

Memphis Campus

UPDATES IN MEDICINE

Carroll County Hospital; Huntingdon, Tenn.

McKenzie Memorial Hospital; McKenzie, Tenn.

Henry County Hospital; Paris, Tenn.

Monthly, third Monday; 6:15-9 p.m. (2 hrs. credit); locations rotate.

Nashville Memorial Hospital, Madison, Tenn.
Monthly, third Tuesday; 12:00 noon (1 hr. credit)

If you would like assistance in planning a community-based CME program, contact the Associate Dean for CME and every attempt will be made to assist you through one of our three campuses.

For further information about any of these courses, please call the appropriate individuals below:

- (C) Mr. LeRoy J. Pickles, Chattanooga
Tel. (615) 756-3370
- (K) Ms. Kay Laurent, Knoxville
Tel. (615) 971-3345
- (M) Ms. Grace Wagner, Memphis
Tel. (901) 528-5547

or write or telephone: James E. Farris, Ed.D., Director of CME, University of Tennessee College of Medicine, 800 Madison Ave., Memphis, TN 38163, Tel. (901) 528-5547.

SOUTHERN MEDICAL ASSOCIATION

Medical Staff Leadership Conference

To prepare physicians for the responsibilities involved in hospital staff leadership. **Credit:** 11 Elective hours for AAFP; 11 hours AMA Category 1.

Sept. 17-18 Hyatt Regency Hotel, Nashville
Oct. 1-2 Lodge of the Four Seasons — Lake Ozark, Mo.

For information contact Jeanette Stone, Southern Medical Association, P.O. Box 2446, Birmingham, AL 35201, Tel. (205) 323-4400.

IN SURROUNDING STATES

UNIVERSITY OF KENTUCKY

Mini-Residencies in Office Management Of Emotional Problems

The objective of this course is to give physicians an ideal emotional counseling technique that fits busy office practices. The technique uses a concept of emotions that is consistent with human anatomy and psychophysiology. Yet, the technique requires no more physician time or patient cost than routine evaluations of new patients. Finally, the technique is readily understandable and easy for practitioners to apply.

One, two and three week courses. Minimum of 40 hours per week. *Tuition Fee:* \$350 per week for the 1st & 2nd week of training; \$500 for 3rd week of supervised practice with patients in the Intensive RBT Treatment Program.

For further information contact Maxie C. Maultsby, Jr., M.D., Office of Continuing Medical Education, Dept. of RBT, University of Kentucky, Lexington, KY 40506.

OF SPECIAL INTEREST

METHODIST HOSPITAL OF INDIANA

Sept. 25-27 2nd National Seminar on Community Cancer Care (cosponsored by the Clinical

Oncology Center)—Hyatt Regency, Indianapolis.

For information contact Office of Continuing Medical Education, Methodist Hospital of Indiana, Inc., 1604 N. Capitol Ave., Indianapolis, IN 46204.

INT'L. MEDICAL EDUCATION CORP.

Clinical Management of Coronary Disease and Exercise Testing

Aug. 14-16 Hilton Head Hyatt, Hilton Head, S.C.

Dec. 4-5 Hyatt Regency, Atlanta

Arrhythmias and Cardiac Ischemia

Oct. 23-24 Peachtree Plaza, Atlanta

Nov. 6-7 Le Pavillon, New Orleans

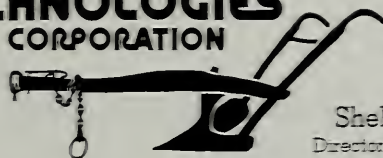
For information contact Director of CME, International Medical Education Corp., 64 Inverness Drive East, Englewood, CO 80112. Tel. (800) 525-8646, ext. 105.

AMERICAN ACADEMY OF ALLERGY

Oct. 30-31 Allergy and Immunology for the Clinician—Hyatt on Hilton Head Island, S.C. *Credit:* 14 hours AMA Category 1.

For information contact A. J. Kimber, American Academy of Allergy, 611 E. Wells St., Milwaukee, WI 53202. Tel. (414) 272-6071.

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Drowning Victims Survive Longer In Cold Waters

In the United States there are an estimated 6,000 to 7,000 drownings each year. Emergency medicine experts had long assumed there was virtually no hope of recovery for the drowning victim under water more than five or six minutes, but in recent months a number of reports have appeared of individuals who survived much longer immersion. The temperature of the water is the key factor: icy cold water extends the survival period.

A 23-year-old woman was a passenger in a car that plunged into the icy waters of the Charles River in Boston. Driver of the vehicle was extricated from the vehicle within a minute or two, but rescuers were not aware of the woman passenger until the auto was lifted from the water after 25 minutes. Resuscitation was begun immediately and the victim was rushed to the hospital. The patient recovered gradually under treatment and went home after two weeks, mentally and physically normal.

A 27-year-old paralyzed man plunged with his motorized wheel-chair into the Charles River and was under water for at least six minutes before rescue. He also recovered after a week in the hospital.

The cases illustrate that patients suffering prolonged submersion in cold water may be successfully resuscitated without permanent brain damage. The extreme cold slows the metabolic rate of the brain, thus lessening brain damage from lack of oxygen while under water. Body temperature of the woman auto accident victim was 84 F when she was brought to the hospital.

Runners Warned of Health Hazard From Rubber Cement

A common practice of marathon runners to cushion blistered feet—use of rubber cement—may cause anemia. Physicians are becoming more aware of the unique medical problems seen in long-distance runners, including joggers' nipples, bone spurs, joggers' petechiae (red spots caused by bleeding under the skin surface),

penile frostbite, and assorted sprains, blisters, and other muscle and bone injuries.

Blistering of the feet is common in marathon runners. To combat this problem, runners use a variety of methods to toughen their feet, including spraying them with tincture of benzoin solution. Once the feet have become blistered, adhesive tape is used over the raw areas while running. Some runners use rubber cement containing benzene to further cushion the blistered spot and keep the tape in place.

Researchers relate experience in treating a 26-year-old male marathon runner who first noticed symptoms of extreme fatigue, muscle cramps and easy bruising while participating in the New York Marathon. The symptoms became worse during the Boston Marathon of 1978, and doctors then determined that he was suffering from anemia.

Aplastic anemia has been reported after exposure to many drugs and toxins, including benzene, the doctors point out. The rubber cement used by the runner to ease the pain of severe blisters contained benzene. He had used rubber cement for at least a year during daily two-hour training runs. The rubber cement was spread over the foot area that was denuded of skin, then held in place by an adhesive bandage, thus enhancing absorption of the substance into the system.

Air Ambulance Transport May Be Harmful to Patient

It can be a highly risky business to transport a patient by air these days, because nobody is overseeing the operation of the air ambulance industry. The Federal Aviation Administration requires checks of these aircraft to assure their airworthiness, but no other agency imposes requirements to guarantee that they are properly equipped and staffed.

An AMA commission is in the process of doing something about this problem right now. It is developing guidelines that will set forth minimum standards for equipment, manpower, and outlining protocol for handling medical problems. This commission is being assisted by the U.S. Dept. of Transportation and the Federal Aviation Administration, both of whom have voiced similar concern about the lack of supervision and standards for air ambulance services.

Outfitting a Piper Cub with a cot and a bottle of oxygen does not make it an air ambulance. Most states do not even know what's out there in the way of such services. Only a few states have addressed this

problem by developing certification standards. Indiana is currently developing minimum standards for certification of air ambulance providers.

The first draft of AMA's guidelines for air ambulances should be completed by early 1981.

Exercise Called Important To Weight Reduction Program

Exercise is important to a weight reduction program. Regular programs of walking, running, swimming, rowing, rope skipping, skating or skiing are great for burning off the extra pounds of fat, but the obese person should do more than simply schedule three or four exercise periods each week. Individuals must be encouraged to be more active in regular everyday life activities. Park the car farther away from the store when shopping. Walk instead of riding back and forth to school, to work, to shopping. Use manual instead of power tools. Avoid elevators and escalators and use the stairs. And walk the dog more often.

Many obese persons actually eat less than their leaner counterparts, but are far less active physically. Daily caloric requirements can vary from 1,800 calories for sedentary men to 6,000 or more calories for laborers, soldiers in the field, and endurance athletes.

Passive exercise devices that do the work for you get a poor score. The weight reducing claims made for mechanical vibrators are not borne out; special weight reducing clothing and inflatable outfits rely chiefly on dehydration from sweating, and the loss of body fluids is replaced with the next few glasses of water. Most of the manufacturers of weight reducing clothing and gadgets also recommend a low calorie diet, and this is what takes off the pounds.

Spot reduction — taking inches off the waist, thighs or buttocks without dieting through regular exercise in just minutes a day — won't work either. One researcher measured subcutaneous fat in the arms of skilled tennis players, and found that the playing arm had just as many fat deposits as the other arm.

Exercise should be of long duration, half an hour or more, to be of maximum value. Longer, steady exercise probably is more useful in taking off pounds than is the sudden burst of energy for short periods. Workouts should be at least three times a week, preferably four or more. Two days per week exercise programs do little to take off fat.

The exercise recommendations do not mean that a reduction in calories is not needed to lose weight. Counting calories is still vital. But diet alone seldom will do the job that can be done by diet combined with exercise.



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For details send credentials in confidence to Susan Haberman, 845 East Arapaho, Richardson, TX 75081; or call collect 214-669-0606.

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For details, forward credentials in complete confidence to John Kutchback, 970 Executive Parkway, St. Louis, MO 63141; or call toll-free, 1-800-325-3982.

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Please send resume to Dr. Thomas Little, Regional Medical Director, United States Postal Service Headquarters, Southern Region, Memphis, Tennessee 38166.

POSITION WANTED IN ANESTHESIOLOGY

Anesthesiologist, certified and with 15 years of experience, desires position in smaller hospital.

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of the Institute for Scientific Information

Physicians Who Served As Doctor-of-the-Day — 1981

The Doctor-of-the-Day program, sponsored by the Tennessee Medical Association and the Tennessee Hospital Association, affords physicians the opportunity to become more aware of the workings of the legislature while providing treatment to the legislators and their staff. The Doctors-of-the-Day usually serve Tuesday through Thursday during the working session of the General Assembly. The Tennessee Medical Association recognizes the following physicians who served during the first session of the 92nd General Assembly.

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Otitis media caused by *S. pneumoniae* (formerly *D. pneumoniae*) and *H. influenzae*
Acute exacerbation of chronic bronchitis caused by *H. influenzae**

*Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to *H. influenzae*.

SKIN AND SKIN STRUCTURES (integumentary) infections caused by Group A beta-hemolytic streptococci and staphylococci, non-penicillinase producers.

URINARY TRACT INFECTIONS caused by *E. coli* and *P. mirabilis*. (This drug should not be used in any *E. coli* and *P. mirabilis* infections other than urinary tract.)

NOTE: Perform cultures and susceptibility tests initially and during treatment to monitor effectiveness of therapy and susceptibility of bacteria. Therapy may be instituted prior to results of sensitivity testing.

Contraindications Contraindicated in individuals with history of an allergic reaction to penicillins.

Warnings Cyclacillin should only be prescribed for the indications listed herein.

Cyclacillin has less *in vitro* activity than other drugs of the ampicillin class. However, clinical trials demonstrated it is efficacious for recommended indications.

Serious and occasional fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin. Although anaphylaxis is more frequent following parenteral use, it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with history of sensitivity to multiple allergens. There are reports of patients with history of penicillin hypersensitivity reactions who experienced severe hypersensitivity reactions when treated with a cephalosporin. Before penicillin therapy, carefully inquire about previous hypersensitivity reactions to penicillins, cephalosporins and other allergens. If allergic reaction occurs, discontinue drug and initiate appropriate therapy. Serious anaphylactoid reactions require immediate emergency treatment with epinephrine. Oxygen, I.V. steroids, airway management, including intubation, should also be administered as indicated.

Precautions Prolonged use of antibiotics may promote overgrowth of nonsusceptible organisms. If superinfection occurs, take appropriate measures.

PREGNANCY: Pregnancy Category B. Reproduction studies performed in mice and rats at doses up to 10 times the human dose revealed no evidence of impaired fertility or harm to the fetus due to cyclacillin. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, use this drug during pregnancy only if clearly needed.

NURSING MOTHERS: It is not known whether this drug is excreted in human milk. Because many drugs are, exercise caution when cyclacillin is given to a nursing woman.

Adverse Reactions Oral cyclacillin is generally well tolerated. As with other penicillins, untoward sensitivity reactions are likely, particularly in those who previously demonstrated penicillin hypersensitivity or with history of allergy, asthma, hay fever, or urticaria. Adverse reactions reported with cyclacillin: diarrhea (in approximately 1 out of 20 patients treated), nausea and vomiting (in approximately 1 in 50), and skin rash (in approximately 1 in 60). Isolated instances of headache, dizziness, abdominal pain, vaginitis, and urticaria have been reported. (See WARNINGS) Other less frequent adverse reactions which may occur and are reported with other penicillins are anemia, thrombocytopenia, thrombocytopenic purpura, leukopenia, neutropenia and eosinophilia. These reactions are usually reversible on discontinuation of therapy.

As with other semisynthetic penicillins, SGOT elevations have been reported.

As with antibiotic therapy generally, continue treatment at least 48 to 72 hours after patient becomes asymptomatic or until bacterial eradication is evidenced. In Group A beta-hemolytic streptococcal infections, at least 10 days' treatment is recommended to guard against risk of rheumatic fever or glomerulonephritis. In chronic urinary tract infection, frequent bacteriologic and clinical appraisal is necessary during therapy and possibly for several months after. Persistent infection may require treatment for several weeks.

Cyclacillin is not indicated in children under 2 months of age.

Patients with Renal Failure Cyclacillin may be safely administered to patients with reduced renal function. Due to prolonged serum half-life, patients with various degrees of renal impairment may require change in dosage level (see DOSAGE AND ADMINISTRATION in package insert).

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INFECTION	ADULTS	CHILDREN*
Respiratory Tract		
Tonsillitis & Pharyngitis	250 mg q.i.d.	body weight < 20 kg (44 lbs) 125 mg q.i.d. body weight > 20 kg (44 lbs) 250 mg q.i.d.
Bronchitis and Pneumonia		
Mild or Moderate Infections	250 mg q.i.d.	50 mg/kg/doy q.i.d.
Chronic Infections	500 mg q.i.d.	100 mg/kg/doy q.i.d.
Otitis Media	250 mg to 500 mg q.i.d.†	50 to 100 mg/kg/doy† q.i.d.†
Skin & Skin Structures	250 mg to 500 mg q.i.d.†	50 to 100 mg/kg/doy† q.i.d.†
Urinary Tract	500 mg q.i.d.	100 mg/kg/doy

*Dosage should not result in a dose higher than that for adults.
†depending on severity

Pancreatic Pseudocyst:

An Unusual Presentation as a Gastric Intramural Mass

JORGE E. SALAZAR, M.D.; MARK NOVICK, M.D.; and IAN MURRAY, M.D.

Introduction

Pancreatic pseudocysts are not uncommon but complications are rare. A pseudocyst is a walled-in collection of pancreatic secretions which has escaped from ruptured pancreatic ducts,¹ and is seen with both acute and chronic pancreatitis in association with a chronically diseased and fibrosed gland.² Obstruction of the main pancreatic duct with subsequent increased intraductal pressure leads to anterior perforation of the duct and spillage of pancreatic secretions into the lesser omental sac. This results in a severe chemical peritonitis with production of profuse inflammatory exudation by the serosal surfaces. The exudate seals off the foramen of Winslow, with encystment of the fluid in the lesser omental sac. The cyst wall is made up of those structures adjacent to the inflammatory collection—the posterior stomach wall, transverse mesocolon, etc. These components become thickened as inflammatory organization and fibrosis continues, creating an encapsulated cystic collection of old blood, pancreatic juice, fat, and necrotic debris.³ Cysts secondary to chronic pancreatitis contain clear or turbid fluid

which may be mucoid, whereas cysts secondary to acute pancreatitis or pancreatic necrosis may contain necrotic tissue particles and hemorrhagic fluid.⁴ Although pseudocysts are usually intra-abdominal, rare instances of intrathoracic or intrapelvic pseudocysts have been reported.⁵

Radiographic diagnosis of pancreatic pseudocysts has been reviewed by Komaki and Clark.⁶ Plain film findings of pancreatic calcifications and a mass posterior to the stomach on barium studies are strongly suggestive of a pseudocyst, and were found in 60% of proven cases. Renal and psoas muscle outlines were obliterated in approximately 29%, possibly by retroperitoneal effusion of cyst fluid. Upper GI series will often show displacement or distortion of organs adjacent to the pseudocyst. Barium colon examination may show irritation of the splenic flexure or extrinsic compression,⁶ and ultrasound and abdominal CT will often show the lesion as cystic or mixed.

Due to the high protein content of the collection, osmotic pressure draws fluid into the cyst, increasing its size.³ If the internal pressure becomes great enough, spontaneous rupture and drainage may occur. This is the most common complication of pseudocysts, occurring in 5% of cases.^{7,8} Pressure necrosis and/or tryptic digestion are thought to be the cause of spontaneous perforation,⁹ 50% of which will drain intraperitoneally. This carries a grave prognosis

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PANCREATIC PSEUDOCYST/Salazar

and is associated with a high mortality rate (70%). The other 50% tend to drain into a hollow viscus, usually the stomach. The prognosis for these is relatively good and the event is often curative.⁷ Decompression into the colon, on the other hand, carries a high incidence of infection, with conversion of the pseudocyst into an abscess.⁹ Surgical treatment is available for those that do not rupture.^{10,11}

Pseudocysts may form chronic fistulous communications with the GI tract as a means of decompression and drainage. Radiographic documentation of such tracts has been presented by Clements et al⁹ in a presentation of six cases. Their literature review showed 61 cases of spontaneous drainage into the GI tract with the following distribution: colon (27), duodenum (16), stomach (12), and unspecified (6).

Intramural location, another presentation of pancreatic pseudocysts, is exceedingly rare, and literature review revealed few documented cases. Clements et al⁹ described a case of pseudocyst that presented as an intramural dissection into the duodenal wall followed by rupture into the duodenal lumen. Intramural pseudocysts have been described in the colon,⁴ duodenum,^{3,9} and stomach.² To our knowledge, no intramural localization has been demonstrated in the esophagus.

Radke and Bell² described one case of gastric intramural pseudocyst involving the gastric antrum. Their radiographic impression was that of

gastric muscle hypertrophy vs. tumor. Surgical investigation was required to arrive at the correct diagnosis.

Case Material

A review of Memphis Veterans Administration Medical Center records over the past ten years revealed 37 surgically proven cases of pancreatic pseudocyst. Radiographs and operative findings were reviewed specifically for gastric intramural localization of pseudocysts. The single case of gastric intramural pseudocyst is reported below.

Report of a Case

A 38-year-old male chronic alcoholic was hospitalized for left upper quadrant (LUQ) pain, nausea and vomiting. Past history included numerous admissions over the past three years for chronic relapsing pancreatitis. In 1978, he had an episode of pancreatitis with erosion into the splenic artery. At splenectomy no pseudocyst was found. On subsequent admission on Aug. 4, 1979, an LUQ mass (6 x 8 cm) was found. Ultrasound determined it was not cystic. Laboratory findings: hematocrit 41%, white blood cell count 16,600/cu mm, sodium 143 mEq/liter, potassium 3.8 mEq/liter, chloride 100 mEq/liter, glucose 428 mg/dl, and serum amylase 408 units/dl.

Radiography of the abdomen showed several calcifications in the region of the pancreas.

Upper GI series showed an intramural submucosal mass in the gastric fundus. Prominent thickened folds were also noted in the distal esophagus (Fig. 1A-C). No ulcerations or fistulous communication were demonstrated. Our preliminary diagnosis was intramural submucosal fundal mass. In view of the patient's past medical history, a pseudocyst was felt likely although the possibility of neoplasm was not excluded. Fiberoptic gastroscopy verified the radiographic features. The mucosa was intact, and multiple biopsies

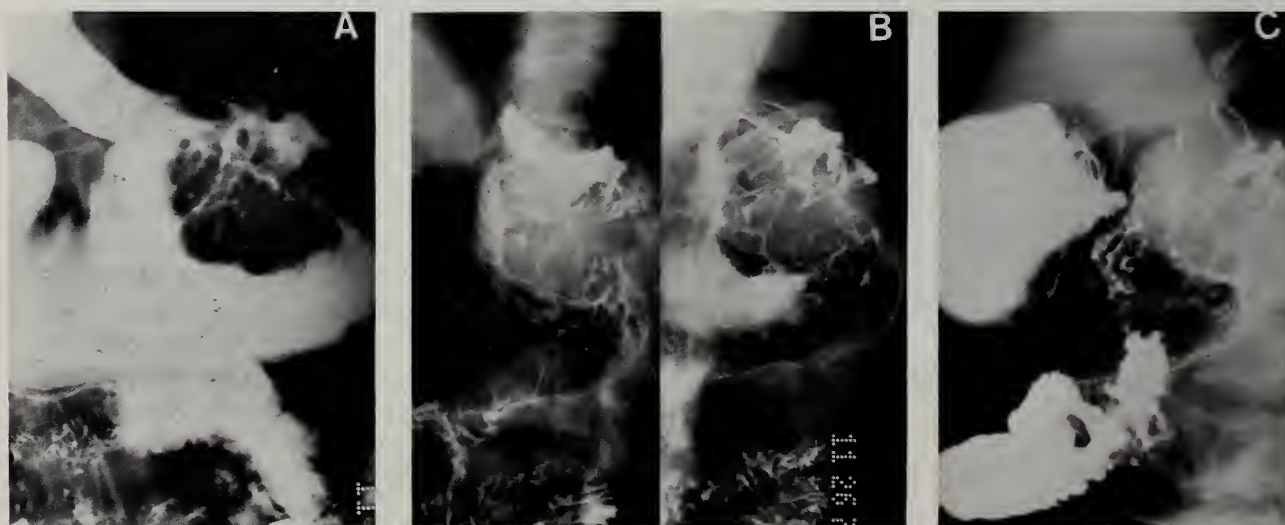


Figure 1. (A-C) Multilobulated submucosal mass showing prominent and thickened mucosal folds localized to the gastric fundus with extension into distal esophagus.

showed normal gastric mucosa. Endoscopic retrograde cholangiopancreatography (ERCP) was subsequently performed. As the pancreatic duct filled, a large cyst cavity was seen to fill from the tail of the main pancreatic duct (Fig. 2A). The cavity correlated anatomically with the lesion seen on upper GI series. The endoscope was noted to traverse the lesion (Fig. 2B), and a barium meal given post ERCP accurately localized the cyst in the gastric fundus (Fig. 3). No intragastric communication could be demonstrated.

Surgical exploration substantiated the radiographic findings. No intraperitoneal pseudocyst cavity was seen, but a fistulous communication was noted between the anterior side of the pancreatic tail and the posterior wall of the stomach. A marked inflammatory response was seen in this

region. Incision of the gastric wall revealed the intramural pseudocyst cavity; pathologic evaluation of the lesion showed edematous gastric submucosa with extensive fibrosis. Cystogastrostomy was performed, and postoperative recovery was uneventful.

Discussion

This case is felt to represent the first example of an intramural pseudocyst correctly diagnosed and documented prior to laparotomy. A high degree of diagnostic confidence was made possible by combining the radiographic findings on upper GI series with the demonstration of a pseudocyst during preoperative evaluation of the pancreatic ducts by ERCP. Evaluation by ERCP in the diagnosis of pancreatic disease has been reviewed previously.^{4,12} Rohrmann et al¹³ demonstrated consistently abnormal studies associated with pancreatic pseudocysts, with filling of the cyst cavities in 62%.

Pseudocysts can invade adjacent viscera by enzymatic digestion and pressure necrosis, producing marked inflammatory changes. In such cases the visceral wall may appear irregular and ragged, spontaneous internal drainage can eventually follow, and on occasion a pancreaticogastric fistula develops, with pancreatic juice dissecting into the wall of the stomach with subsequent formation of a pseudocyst. With increasing secretions and pressure, the pseudocyst may rupture into the gastric lumen. The intramural localization depends on the depth of penetration of the fistula, with fluid collection developing between the serosa and muscularis, or between muscularis and mucosa.³

Secretions of a chronically fibrosed gland may

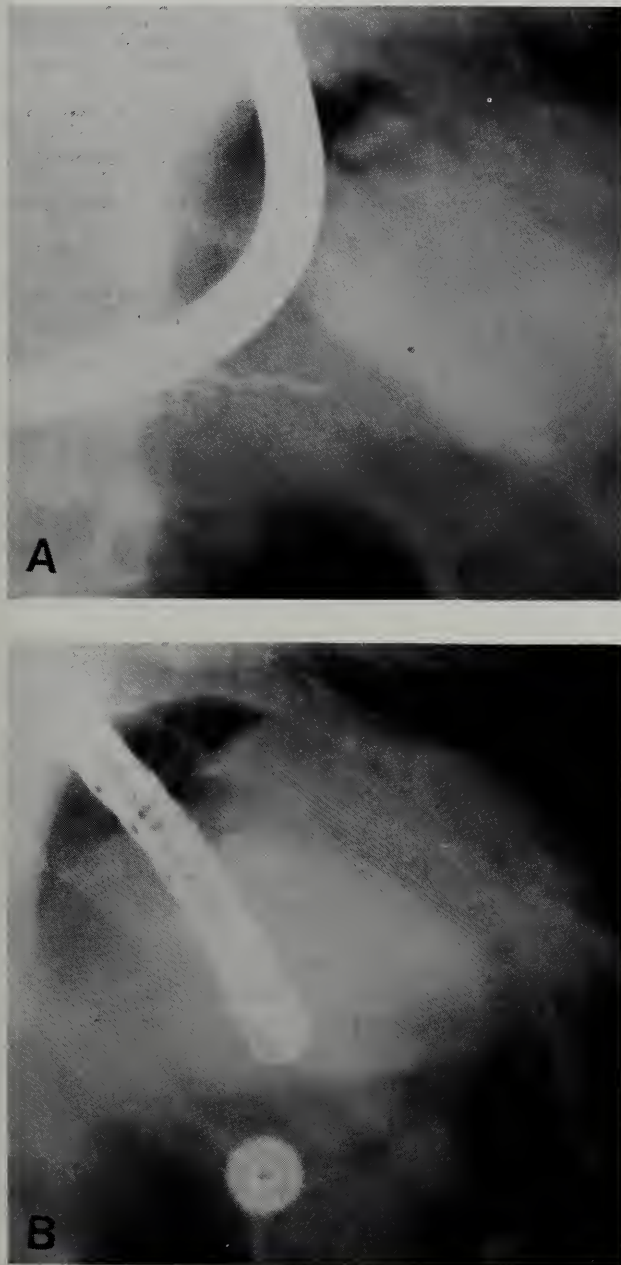


Figure 2. (A-B) ERCP shows filling of cyst cavity from distal main pancreatic duct with localization of the cavity around the endoscope.

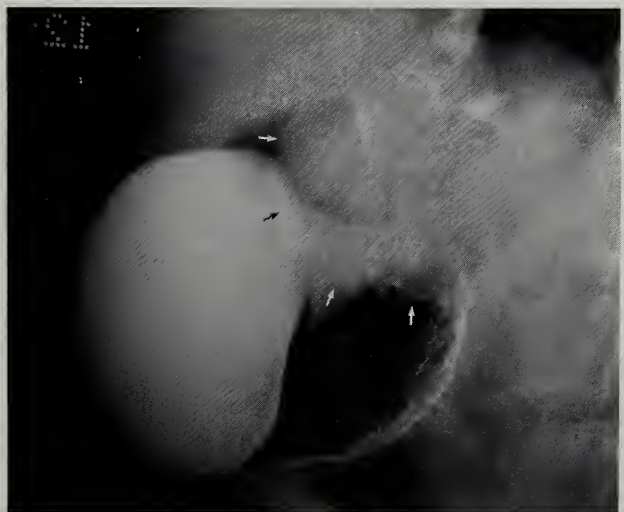


Figure 3. Barium meal post ERCP. Cyst cavity seen as the fundal mass (arrows).

PANCREATIC PSEUDOCYST/Salazar

have decreased proteolytic activity as compared with secretions of the normal or acutely involved pancreas.² We assume this factor and the free communication of the main pancreatic duct with the pseudocyst may explain the confined intramural location of the pseudocyst. This may also explain the noncystic nature of the lesion on ultrasound. It is possible that the pseudocyst may have decompressed antegrade through the main pancreatic duct prior to ultrasound evaluation of the abdomen. The apparent solid nature of the lesion may be explained by the mass of thickened mucosa and submucosa in the gastric fundus.

Summary and Conclusions

Gastric intramural pancreatic pseudocysts are a rare occurrence, seen in less than 3% of documented pseudocysts at our institution. The usual differential diagnosis of intramural submucosal lesions occurring in the gastric fundus includes gastric varices, leiomyoma or other mesenchymal tumors, lymphomas, hiatal hernia repairs (Nissen fundoplication). In a patient with pancreatitis, an intramural lesion involving the

GI tract should suggest pancreatic pseudocyst. ERCP may add additional useful information.

Acknowledgment:

We thank Mrs. Sharon Fallis for her assistance in the preparation of this manuscript.

REFERENCES

1. Hoxworth PJ, Mattheis H, Coith RI, et al: Internal drainage for pseudocysts of the pancreas. *Surg Gynecol Obst* 117:327, 1963.
2. Radke HM, Bell JW: Gastric intramural pseudocyst in chronic pancreatitis. *Am J Surg* 111:584-586, 1966.
3. Bellon EM, George CR, Schreiber H, et al: Pancreatic pseudocysts of the duodenum. *Am J Roentgenol* 133:827-831, 1979.
4. Shockman AT, Marasco JA: Pseudocysts of the pancreas. *Am J Roentgenol* 101:628-638, 1967.
5. McClintock JT, McFee JL, Quimby RL: Pancreatic pseudocyst presenting as a mediastinal tumor. *JAMA* 192:229-230, 1965.
6. Komaki S, Clark JM: Pancreatic pseudocyst. A review of 17 cases with emphasis on radiologic findings. *Am J Roentgenol* 122:385-397, 1974.
7. Hanna WA: Rupture of pancreatic cysts. Report of a case and review of the literature. *Br J Surg* 47:495-498, 1960.
8. Littman R, Pochaczersky R, Richter RM: Spontaneous rupture of a pancreatic pseudocyst into the duodenum. *Arch Surg* 100:76-78, 1974.
9. Clements JL, Bradley EL, Eaton SB: Spontaneous internal drainage of pancreatic pseudocysts. *Am J Roentgenol* 126:985-991, 1976.
10. Hillis W: The surgical management of pseudocysts of the pancreas. *Am J Surg* 105:651-658, 1963.
11. Murphy RF, Hinkamp JF: Pancreatic pseudocysts. *Arch Surg* 81:564-568, 1960.
12. Zimmon DS, Falkenstein DB, Abrams RM, et al: Endoscopic retrograde cholangiopancreatography (ERCP) in the diagnosis of pancreatic inflammatory disease. *Radiology* 113:287-292, 1974.
13. Rohrmann CA, Silvis SE, Vennes JA: Evaluation of the endoscopic pancreatogram. *Radiology* 113:297-304, 1974.

OPEN INVITATION TO PHYSICIAN ARTISTS TO JOIN AMERICAN PHYSICIANS ART ASSOCIATION (APAA)

Many physicians throughout history have been involved in creative hobbies, such as painting, sculpturing, photography, and crafts. However, in the United States it was not until 1936 that they had an organization in which they could exhibit these creative ventures. At that time the American Physicians Art Association (APAA) was organized by the late Frances H. Redewill, Sr., M.D., a San Francisco urologist and a talented marine painter. He and some other physician artists had the first exhibition of APAA at the convention of the American Medical Association in San Francisco in 1936.

Much national publicity has been accorded the APAA. It has often been termed by critics as one of the finest nonprofessional arts shows in the country. Noted professional artists judge the show each year, awarding the much sought after prizes. The professional show director hangs the show and his word is final.

The majority of members of the APAA are active, artistic creators who exhibit their work in one or more of the following categories: Oils and Acrylics, Water Colors, Sculpture, Photography, Arts and Crafts, and/or Graphics and miscellaneous.

This year the APAA Annual Art Exhibition and annual meeting will be held during the 75th annual Southern Medical Association meeting in New Orleans, Nov. 15-18. Membership in the Southern Medical Association, however, is not required.

Membership is open to all physicians. Those interested should write to Milton S. Good, M.D., Treasurer, APAA, 610 Highlawn Ave., Elizabethton, PA 17022.

Primary Carcinoma of the Fallopian Tube

ANH H. DAO, M.D.; JAMES H. GROWDON, JR., M.D.; and SONG W. WONG, M.D.

Primary carcinoma of the fallopian tube is the least common of all gynecologic neoplasms, with a reported incidence of less than 1%. A practicing gynecologist is rarely confronted with this condition more than once during his professional career. Furthermore, the presenting symptoms are often vague and nonspecific, allowing a correct preoperative diagnosis to be made only rarely. Most often the diagnosis is rendered only after exploratory laparotomy. In the following report we present such a case, with emphasis on the presenting symptoms and postoperative follow-up.

Report of a Case

The patient was a 44-year-old nulliparous black woman who presented to the Metropolitan Nashville General Hospital emergency room complaining of lower abdominal pain of two days' duration. Her menstrual periods had been regular until approximately one month prior to admission, when she experienced two episodes of irregular vaginal bleeding. She complained of urinary frequency and dysuria and was found to have a temperature of 101.8 F. Past medical history was remarkable for one episode of pelvic inflammatory disease many years earlier.

Initial pelvic examination in the emergency room revealed a palpable midline pelvic mass extending to the level of the umbilicus, and the patient was admitted to the gynecology service with the diagnosis of pelvic inflammatory disease. Admission physical examination revealed a well-developed and nourished middle-aged woman in mild distress. Blood pressure was 130/80 mm Hg, pulse 100 beats per minute. Decreased bowel sounds and generalized lower abdominal tenderness were found. The external genitalia were within normal limits. The cervix was nulliparous and firm. The uterus could not be appreciated, but was thought to be incorporated in a mass which extended to the umbilicus. Admitting laboratory data showed PCV of 43, WBC count 18,300, SMA 6 within normal limits, urinalysis 55 to 60 white blood cells and 2+ bacteria per

high power field. The patient was begun on intravenous aqueous penicillin and gentamicin. Abdominal plain film showed small bowel dilatation consistent with an ileus secondary to pelvic inflammation. On the second hospital day, examination under anesthesia revealed a midline abdominal mass the size of an 18 to 19 weeks' gestation. The uterus was retroflexed, firm, and of normal size. No cul-de-sac fluctuation was found and culpotomy was not attempted. Antibiotic therapy was continued. An intravenous pyelogram subsequently showed a normal collecting system with no compression of the ureters.

The patient continued to have low grade fever associated with persistent vomiting and mild abdominal distention. On the fourth hospital day an exploratory laparotomy revealed severe pelvic inflammatory disease with involvement of both right and left adnexa with tubo-ovarian abscesses. Lysis of adhesions, total abdominal hysterectomy, bilateral salpingo-oophorectomy, and partial omentectomy were performed.

Gross examination of the specimen revealed a normal size uterus with fibrous adhesions on the serosa. The right fallopian tube was involved by a tumorous mass which measured 12 cm in maximal diameter. Sectioning showed the tubal lumen filled with friable, brown-tan to red tissue with focal hemorrhagic necrosis (Fig. 1). The mass was surrounded by a thin, stretched tubal wall. The fimbriated end was occluded by dense fibrous adhesions, and adhesions were noted between the distal fallopian tube serosa and the resected omentum, the biopsy of which revealed invasive tumor. The right ovary, which was also surrounded by fibrous tissue, was free of tumor, and the left tube and ovary were involved with a tubo-ovarian abscess but contained no tumor.

Microscopic examination of the right tubal mass revealed a papillary adenocarcinoma of moderate differentiation (Fig. 2). The tumor was located mainly at the distal segment of the tube, and had invaded through the tubal wall in several areas. The proximal segment of the tube, not involved by tumor, showed evidence of chronic salpingitis. The left fallopian tube and ovary and the endometrium were free of microscopic evidence of malignancy. No peritoneal washings were taken.

Postoperatively, the patient was treated with 5,000 rads whole pelvic external radiation and was subsequently begun on melphalan (Alkeran). Approximately one year after the operation, a suspicious firm nodule was found in the right side of the pelvis by rectal examination. Biopsy of the nodule revealed papillary adenocarcinoma with a pattern similar to that of the previously resected tumor. The patient subsequently was treated with hexamethylmelamine, with a dramatic but very limited response. Subsequent cisplatin treatment was without benefit, and the patient ex-

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OVIDUCT CARCINOMA/Dao

pired approximately 22 months after the operation. Autopsy revealed extensive involvement of the pelvis, peritoneum, omentum, and liver by papillary adenocarcinoma. No extension of disease beyond the abdominal cavity was found.

Comments

According to Hu et al,¹ although primary carcinoma of the fallopian tube was first described by Raymond in 1847, the first thorough clinical description was given by Orthmann in 1888.

It is one of the rarest female genital tract carcinomas, with reported incidences ranging from 0.16% to 1.1%.^{1,2} Review of the English literature to 1973 revealed approximately 900 cases. Each year about 20 new cases are reported.

From a review of the reported cases, several important clinical characteristics emerge.^{1,3}

Age and Parity: Fallopian tube carcinoma is seen most often in the fifth and sixth decades, but has been reported in patients ranging in age from 18 to 80. The majority of patients with carcinoma of the fallopian tube have a low parity. In the series reported by Benedet et al³ in 1977, 18 of 41 cases were para I or less and 38 of 41 cases

were para III or less. Several authors have mentioned the association of undesired infertility and carcinoma of the fallopian tube, and have related this to the high incidence of associated pelvic inflammatory disease.^{1,3}

Abnormal Vaginal Bleeding or Discharge: The reported incidence of vaginal bleeding or vaginal discharge ranging from 53% to 83% make it the most common complaint.^{1,3} The abnormal bleeding is usually recorded as intermenstrual or postmenopausal bleeding, vaginal spotting, or vaginal bloody or watery discharge. According to Besserer,⁴ in 1915 Latzko described the syndrome of "hydrops tubae profluens," in which pain associated with carcinoma of the fallopian tube is relieved by profuse vaginal watery discharge followed by disappearance of the pelvic mass. Although he considered it to be typical of tubal carcinoma, it has been found in less than 5% of cases, and has also been associated with benign abnormalities of the fallopian tube such as hydrosalpinx.

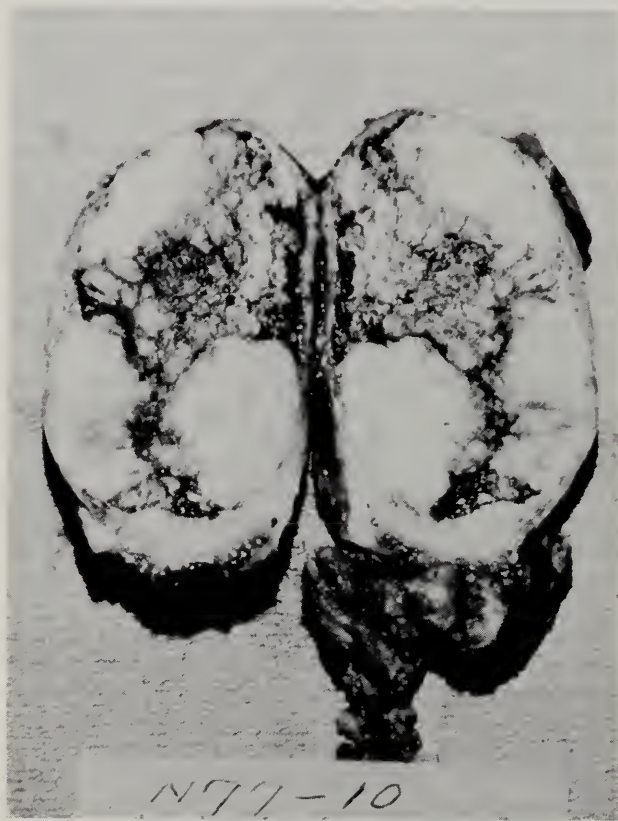


Figure 1. Cross section of the affected fallopian tube showing filling of the tubal lumen by tumorous tissue with stretching of the tubal wall.

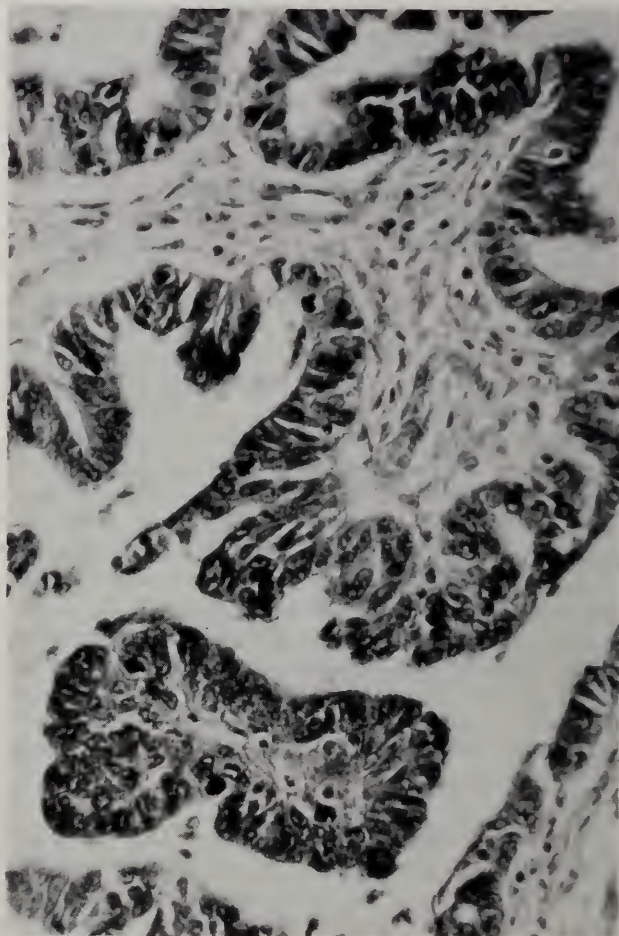


Figure 2. Moderately well-differentiated adenocarcinoma with a papillary pattern from a representative field of the main tumor (hematoxylin-eosin, X 350).

TABLE 1

CLINICAL PATHOLOGICAL STAGING SYSTEM*

Stage 0	Carcinoma in situ, limited to the tubal mucosa.
Stage I	Tumor extending into the submucosa and/or muscularis but not penetrating to the serosal surface of the fallopian tube.
Stage II	Tumor extending to the serosa of the fallopian tube.
Stage III	Direct extension of the tumor to the ovary and/or endometrium.
Stage IV	Extension of tumor beyond the reproductive organs (i.e., other pelvic organs, pelvic soft tissue, peritoneal implants, abdominal viscera).

*From Schiller and Silverberg.⁵

Pain: Pain is the second most frequent symptom, and it has been found in approximately 50% of reported cases.^{1,2} It is often localized in the lower abdomen on the side of the tubal involvement, and is most often described as crampy pain or pelvic pressure, with or without an associated pulling sensation in the pelvis.

Pelvic Mass: The presence of a pelvic mass with or without associated increased abdominal girth was noted in nearly all of the cases by Hu et al.¹ Other authors, however, have found it less frequently. It was present in only 24% of the Benedet et al³ series; Sedlis² found an abdominal mass in only 9% of his cases and described it as a late finding in tubal carcinoma associated with advanced disease.

Pathology

For differentiating primary from metastatic carcinoma involving the fallopian tubes, Hu et al¹ have suggested the following criteria: (1) Grossly, the main tumor is in the tube. (2) Microscopically, chiefly the mucosa should be involved and should show a papillary pattern. (3) If the tubal wall is found to be involved to a great extent, the transition between benign and malignant tubal epithelium should be demonstrable.

The majority of reported cases fulfilling these criteria have been found to have a histologic pattern of papillary adenocarcinoma similar to that found in this case report, but adenocarcinoma with an alveolar pattern has also been described. The tumor has most often been described as filling the tubal lumen and creating a pushing concentric growth. There has not been a tendency for the tumor to invade the muscularis or serosa

in the early phase of the disease, and most often the uterus and ovaries have not been involved by the tumor process. Salpingitis has been an associated finding in a high percentage of cases, and was found in almost all the cases reported by Hu et al.¹

The incidence of bilateral involvement of the tubes has ranged from 7% to 26%.^{2,3} The most common sites of spread beyond the tube include the peritoneum, ovaries, and the uterus.^{2,3}

Treatment and Prognosis

Schiller and Silverberg⁵ in 1971 proposed a clinical pathological staging system (Table 1) which has subsequently been shown to have prognostic value. They found good correlation between the five-year survival rate and the stage of disease, ranging from 91% for stage 0 to 15% for stage IV patients. Once tubal carcinoma has penetrated the serosa of the fallopian tube, five-year survival has been poor in all reported series.

Because of the low incidence of disease, large studies comparing modes of therapy are not available, but it has become evident that at the time of operation a careful staging procedure, including peritoneal washings, peritoneal biopsies, careful evaluation of the subdiaphragmatic region, omentectomy, and total abdominal hysterectomy with bilateral salpingo-oophorectomy, is important initial treatment. The role of subsequent adjunctive radiotherapy and chemotherapy has not been clearly demonstrated. To the present, adjunctive therapy has not appreciably improved survival once the disease has spread beyond the tubal serosa. A recent report by Dreppe et al⁶ of the treatment of advanced-stage fallopian tube carcinoma with adriamycin, cis-diammine dichloroplatinum, progestins, and cyclophosphamide has raised the hope that newer chemotherapeutic agents will be of benefit in more advanced-stage patients.

REFERENCES

1. Hu CY, Taymor ML, Hertig AT: Primary carcinoma of the fallopian tube. *Am J Obstet Gynecol* 50:58, 1950.
2. Sedlis A: Primary carcinoma of the fallopian tube. *Obstet Gynecol Survey* 16:209, 1961.
3. Benedet JL, White GW, Fairey RN: Adenocarcinoma of the fallopian tube. *Obstet Gynecol* 50:654, 1977.
4. Besserer G: Ueber das symptom des hydrops tubae profluens und seine bedeutung fur die erkennung des primaren tubenkarzinoms. *Geburtshilfe Frauenheilkd* 8:610, 1948.
5. Schiller HM, Silverberg SG: Staging and prognosis in primary carcinoma of the fallopian tube. *Cancer* 28:389, 1971.
6. Dreppe G, Bruckner HW, Cohen CJ: Combined chemotherapy for advanced carcinoma of the fallopian tube. *Obstet Gynecol* 56:530, 1980.

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Treatment of Pyoderma Gangrenosum With Clofazimine

A Case Report and Review of Associated Diseases

GEORGE W. LOVETT, M.D.; JAMES P. FIELD, M.D.; and LLOYD E. KING, JR., Ph.D., M.D.

Introduction

Pyoderma gangrenosum (PG) is a chronic ulcerative disorder of unknown etiology. Its characteristic lesion is an ulcer with a necrotic, purulent base and purple, undermined edges. Although systemic steroids and sulfones have been helpful in many cases, no uniformly effective therapy for PG is available. Clofazimine, a remino-phenazine dye useful in treating leprosy, has been recently shown to be useful in treating PG patients who are not successfully treated by other agents.¹⁻⁵ We report a case of PG unresponsive to other agents but successfully treated with clofazimine.

Report of a Case

A 56-year-old white woman had multiple ulcerative lesions on the lower extremities for 18 years, resulting in numerous hospital admissions by her referring physician and one admission at Vanderbilt University Medical Center (VUMC). The initial ulcer appeared as a small papule at the site of a mosquito bite on the left medial malleolus. Subsequently, the progressively enlarging papule became a necrotic pustular lesion which evolved into a painful ulcer with a granulating base bordered by elevated, purplish-red skin. Several other areas of multiple ulcerations appeared on both legs during the ensuing 18 years. Within these areas there were as many as five ulcers at one time, varying in size from 2 X 2 cm to 6 X 6 cm. She was otherwise in good health when first seen at VUMC as an outpatient in 1969, although she frequently complained of leg pain and a diffuse

headache.

Skin biopsies showed focal areas of necrosis histologically compatible with several different ulcerative conditions. There was no histologic evidence of vasculitis or infection, and cultures of the lesions grew only normal flora. Special cultures and biopsy stains for mycobacteria and fungal forms were negative. The following laboratory tests on several occasions (1969-1979) were always normal or negative: WBC counts, hematocrits, electrolytes, automated screening tests, LE cell preparations, antinuclear antibodies and rheumatoid factor, and complement fixation titers for blastomycosis and tularemia. Serum protein electrophoresis was normal, but immunoelectrophoresis showed decreased IgG (345 mg/dl, normal 770-1,130 mg/dl) and IgM (53 mg/dl, normal 90-170 mg/dl), and increased IgA (400 mg/dl, normal 80-200 mg/dl). Tests for occult fecal blood were repeatedly negative. The bone marrow biopsy was reported as normal. An upper GI and small bowel x-ray study were normal. The patient refused permission for a barium enema examination.

After the diagnosis of PG was made in 1976 the patient had limited improvement when treated with various topical anti-infective or anti-inflammatory agents, intralesional steroids, and finally intermittent doses of prednisone, 20 to 60 mg daily (1976-1979). In 1976 dapsone was tried but produced in several weeks a profound anemia and dyspnea despite normal G-6-PD screening tests. Azathioprine, 150 mg daily, led to neutropenia within two months in 1978. In view of the poor response or unacceptable adverse effects of conventional agents she was begun on clofazimine 100 mg three times a day in January, 1979. During the next six months all of the ulcers healed, leaving only dark atrophic scars. The every-other-day prednisone dosage of 60 mg was tapered to 20 mg after a clinical response to clofazimine was noted. She developed a generalized darkening of her complexion during this combined prednisone and clofazimine therapy, but had no other adverse effects.

The patient was admitted to another hospital for evaluation of bifrontal headaches of rapidly increasing severity in November, 1979. She also complained of hearing loss. Significant physical findings were several healed, darkened scars on both legs, normal neurologic findings except for a

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notably flattened and apathetic affect, and bilateral hearing loss. The chest x-ray and subsequent chest tomography disclosed a 16-mm lobulated noncalcific density in the left lower lobe. Laboratory testing showed a normal hematocrit and WBC count, sedimentation rate of 54 mm/hr, normal thyroid function, normal adrenal response to cosyntropin, and negative antinuclear antibody and tests for rheumatoid factor. Computed tomography of the head showed a vascular prominence near the vein of Galen and cerebral arteriography showed a 5-mm aneurysm of the left posterior communication artery. Audiometry was consistent with bilateral sensorineural hearing loss. A lumbar puncture yielded an opening pressure of 120 mm water, and clear cerebrospinal fluid (CSF) with glucose 54 mg/dl, protein 146 mg/dl, 18% lymphocytes, 2% neutrophils, negative Gram and Ziehl-Neelssen stains, negative India ink preparations, no growth on routine, fungal and mycobacterial cultures, and a normal cryptococcal antigen complement fixation titer of 1:28.

A second lumbar puncture two days later produced clear CSF with glucose 24 mg/dl, protein 173 mg/dl, 87% lymphocytes and 48% neutrophils. Routine cultures and Gram and Ziehl-Neelssen stains were negative, but numerous encapsulated yeasts were seen in an India ink preparation. The cryptococcal antigen titer was 1:256, and *Cryptococcus neoformans* grew from culture. Focal seizures developed and were successfully treated with phenytoin. The prednisone was discontinued, as was the clofazimine while she received a six-week course of amphotericin B (900 mg total dose) and 5-fluorocytosine 750 mg three times a day. When her headaches abated and her mental status became normal the pulmonary nodule was felt to represent a cryptococcoma and the hearing loss to be secondary to a basilar meningitis. A third lumbar puncture on the 57th hospital day yielded clear CSF with glucose 33 mg/dl, protein 89 mg/dl, 9% lymphocytes, 1% neutrophils, negative stains and cultures, and a cryptococcal antigen titer of 1:16. She was discharged on clofazimine 100 mg three times a day and phenytoin 100 mg three times a day. She has remained well and free of skin ulcers.

Discussion

Although PG may be truly idiopathic, as in this case, it may be suspected to occur in and be a sign of several different disease processes, such as ulcerative colitis,⁶ Crohn's disease,⁷ rheumatoid arthritis,⁸ inflammatory pulmonary diseases,⁶ leukemias and myeloproliferative diseases,⁹⁻¹¹ carcinoid tumors,¹² and chronic active hepatitis.¹³

The clinical diagnosis of PG may be very difficult to make in the initial stages of the disease process. Since its lesions may be induced by relatively minor trauma (pinprick, bicycle spoke injury, under a leg cast, personal observations), the appearance of a sterile pustule, tender nodule, or grouped herpetiform vesicles may be misleading. Once the classic burrowing lesions occur or large bullous lesions with superficial ulceration are present the diagnosis is more likely to be suspected. Another confusing aspect of PG is that it

has also been called by various other terms, such as chronic undermining burrowing ulcer of Meleny, postoperative serpiginous ulceration of Cullen, and geometric phagedena of Brocq. Whatever the term used for diagnosis, it has been noted that skin grafts frequently are rejected and should not be used until after the PG patient has received therapy with steroids, sulfones, or other similar regimens. Conversely, any patient who has had consistently rejected autologous skin grafts for a chronic ulcer of undetermined etiology should be suspected of having PG.

The etiology of the PG in this patient treated successfully with clofazimine is unknown. She did have hypogammaglobulinemia, which has been found in other patients with PG.¹⁴⁻¹⁶ Many patients with PG have been successfully treated with steroids and/or sulfones, but our patient had complications that required the use of a totally different agent. Clofazimine has been a relatively safe drug, with changes in skin color and secretion and epigastric discomfort being the only frequently seen side effects. How clofazimine acts to control PG is unknown, but it presumably affects the function of the leukocytes as it does in animal models. Although clofazimine is not recommended as the primary or even secondary therapy of PG, it may be useful in patients who have steroid-induced complications or who cannot tolerate sulfones.

REFERENCES

1. Michaelson G, Molin L, Ohman S, et al: Clofazimine: a new agent for the treatment of pyoderma gangrenosum. *Arch Dermatol* 112:344-349, 1976.
2. Beurl J, Weber M, Delrous JL, et al: Pyoderma gangrenosum: clofazimine therapy. *Ann Dermatol Venerol* 104:631-634, 1977.
3. Hastings RC, Jacobson RR, Trautman JR: Long-term clinical toxicity studies with clofazimine (B663) in leprosy. *Int J Lepr* 44:287-293, 1976.
4. Bor S: Clofazimine (Lamprene) in the treatment of vitiligo. *S Afr Med J* 47:1451-1454, 1973.
5. Thomsen K, Rothenborg HW: Clofazimine in the treatment of pyoderma gangrenosum. *Arch Dermatol* 115:851-852, 1979.
6. Perry HO: Pyoderma gangrenosum. *South Med J* 62:899-908, 1969.
7. Bishopric GA, Bracken JS: Pyoderma gangrenosum as the presenting sign of regional ileitis. *South Med J* 57:675-678, 1964.
8. Stolman LP, Rosenthal D, Yaworsky R, et al: Pyoderma gangrenosum and rheumatoid arthritis. *Arch Dermatol* 111:1020-1023, 1975.
9. Goldin D: Pyoderma gangrenosum with chronic myeloid leukemia. *Proc R Soc Med* 67(suppl 12, pt 1):1239-1240, 1974.
10. Perry HO, Brunsting LA: Pyoderma gangrenosum. *Arch Dermatol* 75:380-386, 1957.
11. Shore RN: Pyoderma gangrenosum, defective neutrophil chemotaxis and leukemia. *Arch Dermatol* 112:1792-1793, 1976.
12. Lee SS, Biro L, Price E: Pyoderma gangrenosum with carcinoid tumor. *Cutis* 18:791-794, 1976.
13. Byrne JPH, Hewitt M, Summerly R: Pyoderma gangrenosum associated with active chronic hepatitis. *Arch Dermatol* 112:1297-1301, 1976.
14. Karltopp N: Pyoderma gangrenosum with and without hypogammaglobulinemia. *Acta Derm Venereol* 43:265-269, 1963.
15. Holt PJA, Davies MG, Saunders KC, et al: Pyoderma gangrenosum: clinical and laboratory findings in 15 patients with special reference to polyarthritis. *Medicine* 59:114-133, 1980.
16. Lazarus GS, Goldsmith LA, Rocklin RE, et al: Pyoderma gangrenosum, altered delayed hypersensitivity and polyarthritis. *Arch Dermatol* 105:46-51, 1972.

Coexisting Gastric Adenocarcinoma and Lymphoma Following Pulmonary Lymphocytic Infiltration

DAVID M. PARHAM, M.D.; DENNIS K. LEDFORD, M.D.; and GLEN R. PINKSTON, M.D.

Introduction

Although the simultaneous appearance of gastric lymphoma and adenocarcinoma is rare, a number of reports of its occurrence have appeared in the literature.¹⁻³ The occurrence of gastric carcinoma subsequent to the diagnosis of gastric lymphoma has been reported more frequently.^{4,5} The following report concerns a patient who was found to have coexisting gastric lymphoma and adenocarcinoma following a history of pernicious anemia and bilateral pulmonary lymphocytic infiltrate. At autopsy, multiple metastatic sites contained both types of tumor cells.

Report of a Case

A 66-year-old black man was admitted in June 1977 with hemoptysis for one week. The illness had begun two weeks previously with malaise, low grade fever, and cough productive of scant sputum. The cough persisted and the sputum eventually became blood streaked. There was also anorexia and a 10-lb weight loss. The patient's past medical history included a diagnosis of pernicious anemia made in 1973 by a Schilling test and low serum B₁₂ level and treated with parenteral B₁₂.

Examination of the patient revealed scattered rhonchi in both lung fields. Sputum examination was unrevealing, but the chest radiograph showed a bilateral reticulonodular basilar infiltrate. Tuberculin skin testing was positive. Pulmonary function tests revealed mild obstructive disease with a moderate restrictive component and a normal DL_{co}. Bronchoscopy showed no gross abnormalities but a transbronchial biopsy contained an interstitial lymphocytic infiltrate without granulomas. Therapy was initiated with isoniazid

and ethambutol. Sputum cultures were subsequently positive for mycobacteria.

Although the patient showed initial improvement, he began having chronic epigastric pain, and in August 1979 gastroscopy revealed a fundal mass which on biopsy examination was interpreted as gastric carcinoma. Gallium scans and ultrasonography showed evidence of hepatic metastases. On a subsequent admission in October 1979, he developed severe hypoglycemia which required a constant glucose infusion. During evaluation he suffered an apparent cardiorespiratory arrest and could not be resuscitated.

Biopsy. The transbronchial biopsy performed in 1977 consisted of several small fragments showing much crush artifact, focal anthracosis, and a diffuse interstitial infiltration by small lymphocytes with dark nuclei and scanty cytoplasm (Fig. 1, *left*). Scattered cells contained nuclei which appeared cleaved or convoluted. The infiltrate was essentially monotonous with scanty numbers of histiocytes and an absence of germinal centers and plasma cells (Fig. 1, *right*).

Necropsy. Postmortem examination revealed confluent, grayish-tan, rubbery infiltrates in the lower lobes of both lungs. The entire stomach showed massive thickening of the wall and obliteration of the normal rugal pattern. Shaggy

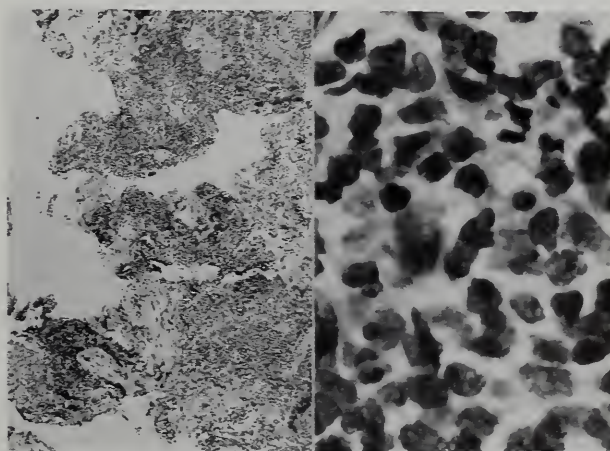


Figure 1. (*Left*) Lung biopsy showing crush artifact, fragmentation, and interstitial lymphocytic infiltration (hematoxylin-eosin, X40). (*Right*) Higher power view of lung biopsy showing cellular detail of lymphocytic infiltrate (hematoxylin-eosin, X1000).

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ulcers measuring 4 x 5 cm with necrotic bases and overhanging irregular margins were noted in the cardia and posterior fundus (Fig. 2). The serosa was also entirely replaced by a coarsely granular plaque-like yellow-gray tumor which formed adhesions with adjacent spleen and liver. The liver weighed 2,025 gm and contained multiple metastatic tumors, the largest measuring 12 x 15 x 9 cm. Numerous mediastinal, perigastric, peripancreatic, mesenteric, and periaortic lymph nodes were diffusely enlarged, homogeneous, firm, and yellow-gray.

Sections of the ulcerated areas of the stomach contained a poorly differentiated mucin-producing adenocarcinoma which extended through the muscularis. The tumor cells were large and pleomorphic and had the usual signet ring configuration. Other areas were diffusely infiltrated by a well-differentiated lymphocytic lymphoma composed of sheets of small mature lymphocytes. The lymphocytes had scanty cytoplasm and small nonconvoluted nuclei with dense chromatin. Intermingling of the adenocarcinoma and the lymphomatous infiltrate was noted in some areas (Fig. 3).

Sections of the lower lobes of the lungs contained a dense interstitial infiltrate of small, mature appearing lymphocytes identical to those in the stomach and in the previous lung biopsy. In many areas the interstitial infiltrate coalesced forming sheets of lymphocytes. Perivascular, subpleural, and intra-alveolar aggregates of large carminophilic

adenocarcinoma cells were noted within the lymphomatous infiltrate (Fig. 4).

Lymphomatous infiltrates composed of small, mature lymphocytes and intermingling with adenocarcinoma cells were also seen in the liver, pancreas, lymph nodes, and spleen. Lymph node involvement was characterized by defacement of the follicular architecture by small lymphocytes with round, dark nuclei and by infiltration of the subcapsular and medullary sinuses by large, pleomorphic signet ring cells with abundant carminophilic cytoplasm (Fig. 5).

Discussion

It has generally been accepted that the risk of having a second primary cancer in patients who already have one malignant neoplasm is greater than the cancer risk in the general population.⁶ Patients with lymphomas and leukemias particularly appear to have a greater likelihood of developing a subsequent carcinoma.⁷ The stomach has been repeatedly noted as the site of multiple neoplasms, occurring both as anatomically separate primary carcinomas and a combination of two histologically distinct tumors. Several reported cases of coexisting gastric adenocarcinomas and lymphomas have appeared in the literature, but the occurrence seems an uncom-

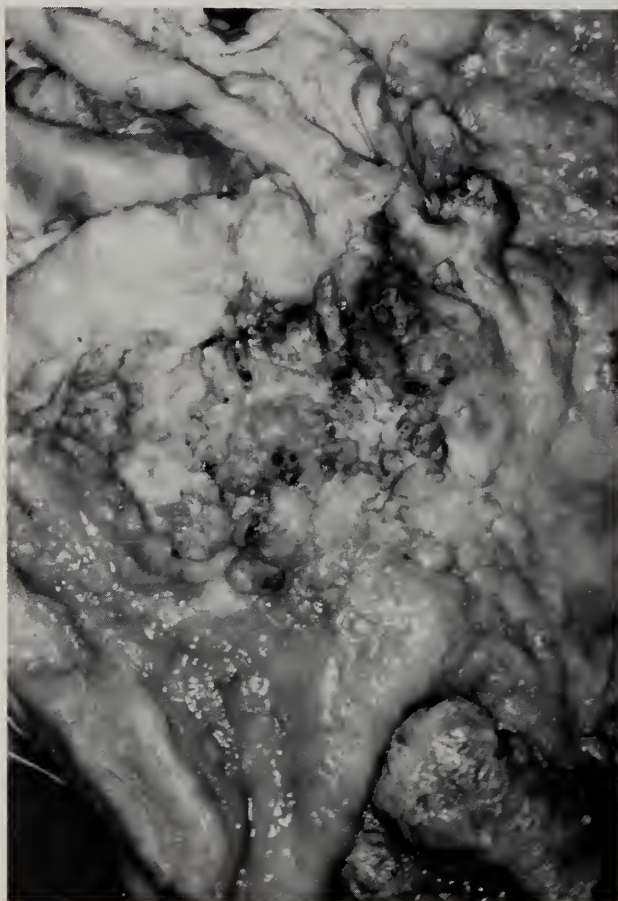


Figure 2. Mucosal surface of stomach with ulcerative adenocarcinoma and diffusely infiltrative lymphoma. Note thickening of gastric wall in upper left-hand corner.

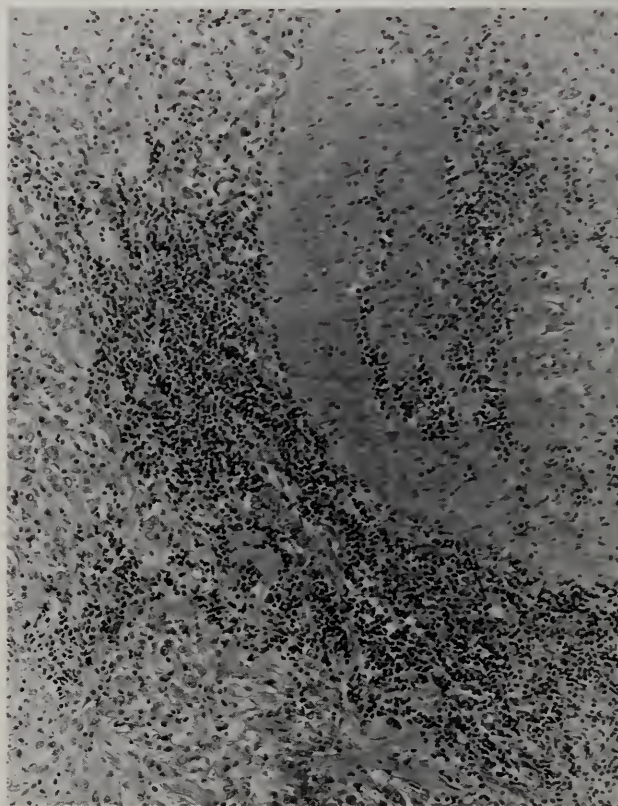


Figure 3. Area of gastric ulceration showing infiltration of muscularis by lymphoma cells (center) and adenocarcinoma (upper left). Note residual smooth muscle (lower right) (hematoxylin-eosin, X100).

mon event.^{1,3} A larger number of gastric carcinomas following gastric lymphoma have been documented.^{4,5}

One of the most intriguing aspects of this case was the massive lymphomatous infiltrate in the lungs, which was preceded by an interstitial lymphocytic infiltrate documented two years earlier by biopsy and roentgenographs. This early infiltrate poses a question as to whether the patient initially had a localized primary lymphosarcoma of the lungs which eventually spread to other sites, or the supposedly benign lymphocytic interstitial pneumonitis which with time underwent malignant transformation. Lymphocytic interstitial pneumonitis (LIP), as described by Liebow, is comprised of an "infiltration with mature lymphocytes" which is "exquisitely interstitial."⁸ Differentiation of LIP from primary lymphosarcoma can be a perplexing problem; major differential features which favor a diagnosis of LIP include mixed cellular infiltrate of histiocytes and plasma cells and, more importantly, absence of nodal involve-

ment.^{9,10} Unfortunately, since the biopsy material on this patient was scanty and since no nodal tissue was available for antemortem studies, one can only speculate on the true nature of the initial lesion. However, the monomorphic nature of the infiltrate and the nuclear irregularities of the cells would seem to favor a diagnosis of lymphoma.

Because of the unpredictable behavior of LIP, differentiation from lymphoma may be of only academic interest. Several cases of LIP which eventually underwent lymphomatous transformation have been described¹¹; one might argue that these cases were malignant from their inception. To add to the confusion, primary lymphosarcoma of the lung characteristically is a slowly progressing malignancy and tends to remain localized for long periods.¹² Other supposedly "benign" lymphocytic disorders, such as angioimmunoblastic lymphadenopathy, frequently undergo malignant transformation.¹³ Thus, some feel that LIP is a slowly progressive malignancy,¹⁴ while others believe that it represents a chronic in-

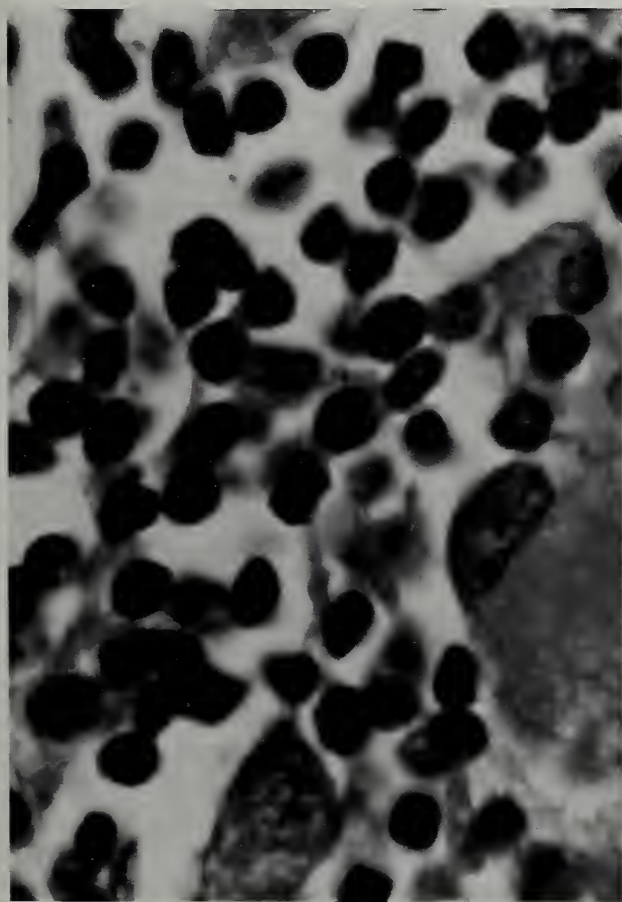


Figure 4. High power view of lung at autopsy showing cellular detail of lymphocytes and scattered adenocarcinoma cells (lower right) (hematoxylin-eosin, X1000).

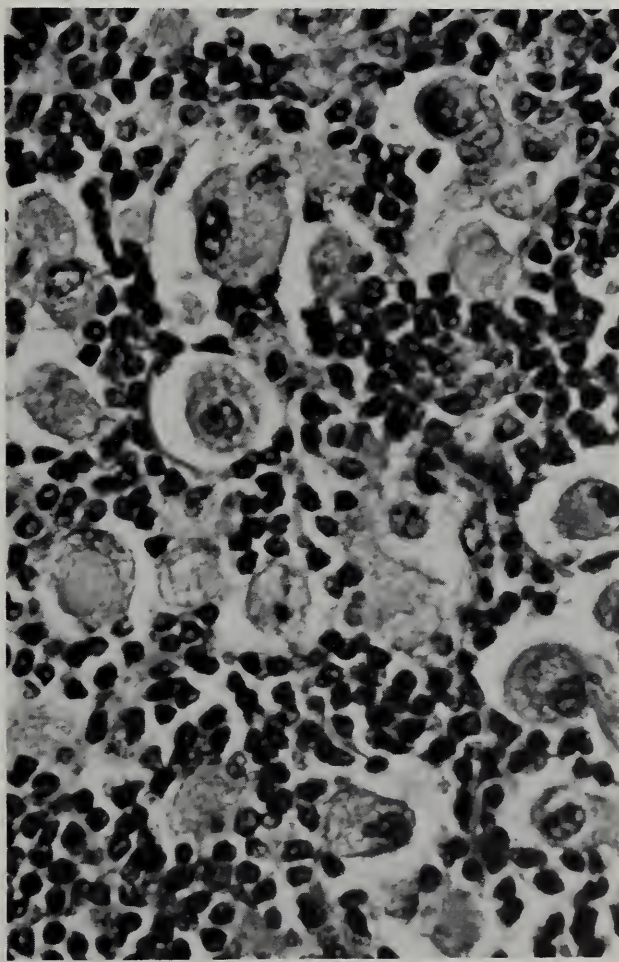


Figure 5. Portion of peripancreatic lymph node showing diffuse lymphocytic infiltrate and aggregates of mucin-containing cells (hematoxylin-eosin, X600).

flammatory reaction to some undetermined stimulant,¹⁵ which in our patient may have been tuberculosis.

Autoimmune disease also has a frequent association with lymphocytic proliferation, and in this present case was represented by pernicious anemia. The association of pernicious anemia to gastric adenocarcinoma is also well documented,¹⁶ and has also been described with LIP.¹⁷ One can speculate that this underlying disorder may have been partially responsible for the peculiar distribution of neoplastic lesions seen in this patient.

The widespread cancer-to-cancer metastasis seen at autopsy represents yet another bizarre aspect of this unusual case. The term "cancer-to-cancer metastasis" is used to describe the metastasis of one tumor into the substance of another. Less than 50 cases have been reported.¹⁸ As a point of additional interest, one of the previously reported cases of coexistent gastric lymphoma and carcinoma developed a pattern of cancer-to-cancer metastasis identical to our case.¹

REFERENCES

1. Jernstrom P, Murray GC: Synchronous double primary lymphosarcoma and adenocarcinoma (collision tumor) of the stomach with cancer-to-cancer metastasis. *Cancer* 19:60-66, 1966.

2. Manier JW, Reyes CN: Collision tumor of the stomach: Report of two cases. *Gastroenterology* 67:1011-1015, 1974.
3. Rabinovitch J, Pinez B, Grayzel D: Coexisting lymphosarcoma and ulcer carcinoma of the stomach. *Arch Surg* 64:185-191, 1952.
4. Fleisher N, Walker R: Gastric carcinoma following successful therapy for primary gastric lymphosarcoma. *South Med J* 53:965-968, 1960.
5. Sellin J, Levin B, Reckard C, et al: Gastric adenocarcinoma following gastric lymphoma: Role of partial gastrectomy. *Cancer* 45:996-1000, 1980.
6. del Regato JA, Spjut HJ: *Ackerman and del Regato's Cancer—Diagnosis, Treatment, and Prognosis*, ed 5. St. Louis, C.V. Mosby, 1977, p 9.
7. Berg JW: The incidence of multiple primary cancers. I. Development of further cancers in patients with lymphomas, leukemias, and myelomas. *J Natl Cancer Inst* 38:741-752, 1967.
8. Liebow AA: New concepts and entities in pulmonary disease, in Liebow AA, Smith DE (eds): *The Lung*. International Academy of Pathology Monograph. Baltimore, Williams and Wilkins, 1968, pp 349-351.
9. Liebow AA, Carrington CB: Diffuse pulmonary lymphoreticular infiltrations associated with dysproteinemia. *Med Clin North Am* 57:809-843, 1973.
10. Saltzstein SL: Pulmonary malignant lymphomas and pseudolymphomas: Classification, therapy, and prognosis. *Cancer* 16:928-955, 1963.
11. Case records of the Massachusetts General Hospital. Case 13-1980. *N Engl J Med* 302:795-803, 1980.
12. McNamara JJ, Kingsley WB, Paulson DL, et al: Primary lymphosarcoma of the lung. *Ann Surg* 169:135-140, 1969.
13. Nathwani BH, Rappaport H, Moran EM, et al: Malignant lymphoma arising in angioimmunoblastic lymphadenopathy. *Cancer* 41:578-606, 1978.
14. Spencer H: *Pathology of the Lung*, ed 5. Philadelphia, W.B. Saunders, 1977, pp 941-946.
15. Halprin GM, Ramirez RJ, Pratt PC: Lymphoid interstitial pneumonia. *Chest* 62:418-423, 1972.
16. Schell RF, Dockerty MB, Comfort MW: Carcinoma of the stomach associated with pernicious anemia: A clinical and pathologic study. *Surg Gynecol Obst* 98:710-720, 1954.
17. Levinson AI, Hopewell PC, Stites DP, et al: Coexistent lymphoid interstitial pneumonia, pernicious anemia, and agammaglobulinemia. *Ann Intern Med* 136:213-216, 1976.
18. Majmudar B: Metastasis of cancer to cancer: Report of a case. *Human Pathol* 7:117-119, 1976.

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Medical Care in the '80s

Why and How Health Care Costs Will Be Contained in the 1980s: A Description of the Major Forces

HENRY E. SIMMONS, M.D.

This is the first paper of a symposium entitled "Medical Care in the '80s," presented before the Vanderbilt Medical Alumni Reunion, May 22, 1981, Nashville. The remaining papers will be published subsequently. —ED

I have been given a number of assignments in this seminar. First, I have been asked to attempt to characterize the conditions which are likely to prevail in the decade of the '80s and their probable impact on us as physicians and on the nation's health care system. Then, to describe why, during the '80s, American industry will become increasingly involved in determining how our health care system operates. And, finally, to discuss what changes are likely to occur in our health care system in the '80s and what steps will be necessary to enable our profession to survive and to fulfill society's needs.

To cover all those subjects could take several days of your time. A speaker, when assigned such a job, always has a dilemma; he wants to give enough information to be useful and yet not so much that it overwhelms his audience and nothing is appropriate.

I first want to confess a bias. As a physician, I consider myself a provider. I believe that the nation will ultimately be best served if the health care system continues to be operated largely by the private sector. I feel that the best guarantee for that will be for those of us in the private sector to thoroughly, openly and honestly assess how that system is operated, recognize our problem, and come forward with solutions to those problems which serve the public interest.

Over the past 15 years I have been uniquely privileged to participate in this country's health

care system from a very wide variety of vantage points through experience in both the private sector and the public sector as a private medical practitioner, as a faculty member and teacher of an academic health center, a federal health official responsible for overseeing a lot of programs that currently regulate our system, as president of a medical center, and finally for the past three years having an opportunity to go all over the country—in fact over parts of the world—to counsel with a wide variety of clients in the health care system. In addition, I have had a chance to counsel with governments, with major insurers, and major segments of American industry as to how this health care system operates. We recently completed a large study for the nation's nine largest steel companies, led by United States Steel, which basically asked us to study how that industry spends about a half billion dollars on over a million people, how care is rendered to their beneficiaries, and what could be done to contain their costs. That is the largest such study ever done for industry in the United States.

I don't profess to have a first-hand knowledge of the problems which exist either here in Nashville or in the areas in which you practice. But through my experiences I have been able to develop some sense of the key issues and the problems facing the nation's health care system, and how a wide variety of elements of our society feel about us as physicians. I have been asked to try to synthesize those experiences and share the perspectives that I have gained with you as you face the '80s and decide how those '80s are going to affect you and your hospital as you attempt to operate in that uncertain environment. Now what's that environment going to be like?

Well, obviously, it's always difficult to predict the future but I believe that there's one thing that I can say with absolute certainty, and I do not overstate the case—the decade of the '80s will be very troubled and very uncertain, and it will test to the utmost, as never before, the institutions and individual physicians who make up this nation's health care system.

Most economic analysts have concluded that the '80s will be unusually troubled, with predictions of continued, serious inflation, a slowing of productivity gain, with predictions of probably the slowest productivity growth since World War II, decreased purchasing power for individual consumers, and probably a decrease in our standard of living. Those pessimistic economic forecasts are paralleled by public perceptions of a worsening economic situation. Sixty-two percent of Americans believe we are entering a period of enduring economic shortages. Thirty-two percent indicate they are already having trouble in handling even their routine expenses for medical care. Just a few months ago the Robert Wood Johnson Foundation, which is the largest medical foundation in the world, and which is headed by Dr. David Rogers, a former professor of medicine here at Vanderbilt, examined the likelihood of what the '80s would be like. They came to similar conclusions: that we are about to price ourselves out of the market. They raised the warning to the health care system that unless that issue is addressed, many of the gains that we have made in the past will be eroded. On a number of occasions since his inauguration we have heard the President speak of an impending economic calamity of tremendous proportions which this nation faces unless it changes its course. He was, of course, referring to the serious problem we have with inflation. Those of us in the health care system have to be particularly concerned with that because there is a strong feeling abroad that the health care system is not only a victim, but also a major cause of inflation. And remember that the federal health care budget is now \$70 billion. It is the second largest, and one of the fastest growing outlays of the federal government. Now, if the President is to control inflation and the federal budget, he will have to control health care costs; and I know he will. The federal actions which will accomplish that are going to have profound effects on all of us working in the health care system. The greatest problem facing the health care system today, and you

and I as members of that system, is the massive and rapidly escalating cost of care. When consumers are asked their main concern with medical care in this country, their number one concern is its rising cost.

There are now two new, large, and very powerful forces which are also concerned and equally determined to do something about the problem, and they are probably going to be more effective than government has ever been. I am referring to the American consumer, and the biggest payer of them all, American industry.

With a nation facing severe inflation, a troubled economy, and a decline in the average standard of living, the problem of high and rapidly rising health care costs will have to be a, or even the, major domestic societal issue in the '80s. It's not hard to understand why. Health care already consumes almost 10% of the gross national product. Per capita health care costs have doubled in the past decade. The Robert Wood Johnson Foundation recently predicted that if ways are not found to reduce the annual rates of increase, personal health expenditures for a family of four, which are already about \$3,500, will double within the next five years to almost \$6,500. And in a very short time the nation's health care bill will be \$1 trillion. In light of the nation's economic problems, the fact that there are other very important areas in which society needs resources, that rapid increase in health care costs is very likely to prove an intolerable and unacceptable condition for government and society. Change in the health care system will be demanded, and that demand will be there regardless of what political party is in power in Washington.

The reasons for those rising health care costs are many. There is plenty of blame to go around, including a substantial blame to government. In many respects, doctors and hospitals are caught in a terrible bind, for a number of their problems have, in fact, been created by counter-productive regulations of both federal and state government. On the other hand, a substantial part of the cost problem is also due to the way we practice medicine. The costs are increased by excessive availability of resources, expensive third-party payment, favorable tax treatment of health insurance benefits costs and medical facility construction bonds, payment barriers to rational system utilization. All of these come together to create disincentives for appropriate use. And all of that

is being further compounded, and increasingly dramatically so, by a very rapid increase in the excess number of physicians which will be flowing into this health care system and which will drive up yet further the costs, all coming together to force government to increasingly look to ways to regulate the health care system in an attempt to contain those costs.

Well, those cost increases and the buyer's responses to it, in turn, are resulting in major system changes and increasingly fierce competition among health care providers. For several reasons, both will increase dramatically. One reason is that the ever-increasing costs, which I believe are going to force dramatic change in our health care system, manifests itself in system shrinkage, reorganization, and emphasis on out-of-hospital preventive care. Given the excess of hospital beds that are currently available, and the rapidly growing excess of physicians, hospitals and physicians will be forced to compete for a market in which there is an absolute necessity to become increasingly price conscious. The second reason for change, and probably the most important, is that big buyers, government, and American industry are now convinced that much—perhaps a third, in some areas half—of all the health care they currently pay for is either unnecessary, inefficiently delivered, unnecessarily expensive, or does not favorably affect the health, and therefore does not serve their or their constituents' or employees' best interests. Given the total resource restraints those buyers now face, they feel they can no longer supply or let our system operate as it has in the past and consume, in their view, in a wasteful fashion, more and more of their available resources. They will force change, and they will begin to deal preferentially with those providers and physicians who can provide appropriate services efficiently and cost effectively. And, indeed, this is already occurring.

So, why have government and industry become convinced that the status quo in medical care is unacceptable and a change must come? I'd like to spend a few minutes to synthesize for you what I have found as I traveled around this country listening to industry and government leaders and community leaders and what their perceptions and views are of the health care system today, why they are concerned, and very, very angry. Now, you may not agree with some of their views. Some may be painful for you to

hear. They've been painful for me to hear. But we must know of them; we can only ignore them at our peril, for perception becomes reality and drives system changes which will affect us all. Those buyers have been presented with and have come to accept the following as fact.

Health care costs have increased more than 300% in just the past decade and they are rising at rates substantially higher than the rate of general inflation. They find that the output of the health care system, in terms of benefit to their workers and society, is nowhere near commensurate with the resources expended. And though we are already operating the most expensive health care system in the world, they see no end in sight. Given the limited resources available to do anything, health care cost increases can only be paid by taking funds from other areas equally or even more important, such as food, housing, education; or in the case of industry, from funds they need for plant modernization so that they can be productive, so that they can compete, so that they can provide jobs and pay health care benefits to their employees. Those buyers have now become convinced that much of the medical care we deliver has no proven benefit. There is now a substantial body of evidence that they have come to believe that these ever higher health care costs are not equated with higher quality care or better health outcome. In fact, more and more evidence seems to be accumulating that in many instances the exact opposite seems to be true and that real quality care will be achieved by doing less than what we now do and doing it to fewer people. Buyers have found that within broad ranges there appears to be no significant correlation between the number of physicians available, their level of training, the amount spent for health care, the intensity of care, the setting in which it's rendered, and the level of health of the population that's served. They are being shown more and more studies about significant problems in the quality of care delivery. But evidence seems to be growing that iatrogenic disease, caused by the care we give, is becoming a serious public health problem. In fact, some authors assessing all the information that I have been presenting to you have concluded that the medical establishment, you and I, have become a major threat to health. Now, that's a terribly painful kind of a thing, isn't it? For us, who have worked so hard and tried to do some good. But it's being said and it's being

considered as a possibility by thoughtful observers.

These buyers of health care are now studying their own utilization statistics. They find there is marked regional variation in hospitalization rates and in treatment patterns of their employees which do not seem to be explainable on the basis of variation in disease or medical means. Some areas of this country get by quite well using one half to one third as many bed days per thousand as other regions, without any adverse effect on the health of the population that's served. And the buyers are asking us in medicine, "How can you defend, from sound medical rationale, such major variations in medical care?"—and we can't. Buyers are now finding that there is good evidence that with alternative delivery systems, both by HMOs and some IPAs, they can get quality health care delivered to large population groups with hospital utilization rates 50% below those of the national average and at substantially lower cost than the traditional fee-for-service system. Those are some of the facts that the buyers have now become convinced characterize much of the present health care system. And, ladies and gentlemen, they see tremendous waste in the tens of billions of dollars.

But who's telling the buyers those things? Well, it's not just a bunch of wild-eyed liberals pushing for national health insurance. Those facts are being laid out by some of the nation's most respected medical experts from all different parts of the nation—from institutions such as the Institute of Medicine and the National Academy of Science—prestigious and knowledgeable national committees pulled together to study the issues. Many of you have come to believe these as facts. This information is being presented broadly to the Congress and to the administration; the U.S. Chamber of Commerce is carrying these facts to the nation's business community. That's got to concern us all because concern about the rising cost of health care is serious enough; but this is now being coupled with the supposition that much of the health care we are delivering is unnecessary and too often, in the judgment of the buyers, may cause as much harm as good. It is that latter set of facts that I, as a physician, believe will most drive reform in the system. For more and more buyers are now convinced that you not only don't have to sacrifice quality, you will actually enhance it by system reform. And for all those reasons—high costs

and perceived inefficiency—the buyers, both government and in the private sector, are demanding change, and will increasingly use either their regulatory authority in the case of government, or the leverage of their purchasing power in the case of industry, to bring about those changes.

Now, why is business concerned? Well, that's not too hard to see. They pay the bills. Business is the biggest buyer of health and related care in the United States—bigger than the federal government, paying out about \$100 billion a year to provide health care benefits for their employees, families and retirees. That, in a time when American industry itself is economically very troubled. All of you who follow the papers have seen many times the headlines "Corporate America Wallowing in Debt." American industry is facing the same competition that we are beginning to face in the health care system. That competition is driving down profits, and business is concerned because what started out as truly a fringe benefit—medical benefits—now constitutes (next to energy) their biggest, most rapidly growing, uncontrollable cost of doing business. Some industries have seen a 250% increase in their medical benefits cost in just four years. In 1960 General Motors spent \$38 million for medical benefits. In 1979 that had risen to \$1.4 billion. Even in years when our economy was healthy, industry could not remain profitable with that kind of uncontrolled cost escalation. And, as you know, many of our biggest industries are in trouble—auto, steel, rubber, farm machinery, agri-business. Corporate profits decreased a record \$19 billion in the last year.

Recently, General Motors reported its biggest loss in history. Steel plants have become antiquated. *Business Week* is calling for the reindustrialization of America to survive, to compete, to provide jobs, to provide profits. And industry knows that the dollars they need for that reindustrialization are going to have to come from profits. And one of the biggest drains on their profits in many industries has been medical benefits cost. For industry cannot and, in my view, will not let that continue. They are determined to use their purchasing power to force change, and they already have begun to use that.

In addition, industry now has a natural ally in their unions. There used to be a "we" and "they" phenomenon. Union members thought, "Well, it's a free benefit. Lunch is free. I don't

pay for this. Our health care benefits come with these costs.” As unions and industry together begin to assess the issues, they are concluding jointly that they are both adversely affected by what’s going on. The union member says “If I put everything I can in medical benefits, which seems able to soak up every dollar I have, there is less and less left over on the bargaining table for my wage increase, which I need.” So you’re seeing industry and union now saying “Look, we’re both in this together. We don’t need to sacrifice quality. Whatever we free up we’ll put on the bargaining table and we’ll bargain over that.” As an example, in the last few negotiations, the United Steel Workers of America, which is, I believe, the nation’s first or second largest union, agreed to the first ever medical necessity provision—mandatory utilization review. They agreed to an experimental second opinion program in surgery, increased deductibles, modifications in the benefits package. Industry is beginning to wake up to the fact that they, in fact, have created many of the problems that they have blamed on us in the health care sector. That’s true. They are, however, realizing that they are modifying the benefits package to allow rational utilization and they will now be looking at you and me to see how our practice patterns change in response to their initiative.

There is an interesting anecdote in the steel industry, by the way, which I thought you might find as interesting as I did. Under the existing benefit package which was before their negotiations, they found that either their number one or number two highest costs were surgical admission to the hospital for dental impaction. That sort of boggles my mind but when you looked at the benefits package it wasn’t too hard to see why. If you went in, it was covered. If you stayed out, you paid out of pocket. Well, that’s been modified. That will be changed. Now they will be looking to the dental profession to see that the practice pattern changes. In addition, then, industry also noted that at the consensus conference at the National Institutes of Health on the issue of dental impaction, the conclusion was that many dental impactions should never be removed in the first place in or out of the hospital. And industry is now beginning to read the same journals we do and they’re coming to us and saying “Doctor, we’re likely to see, aren’t we, a change in your practice pattern in response to this. And, if not, please explain why.”

Industry is looking at its utilization statistics. In the city of Birmingham, industry found its utilization rates were 1,900 patient days per thousand. Now, I don’t know how many of you keep up with those statistics, but an efficient HMO is able to deliver care to an employed population, with quality, at about 400 or 500 patient days per thousand. The industry took those data, they went to our profession, they said “Gentlemen, would you please explain to us, in some medically sound way, why we are paying for five times as much care for a similar population group here as elsewhere?” and the medical society in Birmingham said “We can’t.” In fact, I’d like to share with you something of that experience because I believe that what the American Medical Association did in that instance and what the medical society of Jefferson County in Birmingham did in that instance was a remarkable event. And I’d like to share with you just what they did.

The industry came to the medical society and said “Gentlemen, our utilization statistics are completely out of line here. We can see no defense for it. Will you study them along with us?” And the medical society did that and after a long assessment sent this newsletter to all the physicians of Jefferson County:

Dear Fellow Physician: We are reporting to you an action taken by your board of the medical society after years of concern and months of preparation. The local business community has insisted that health care costs in Jefferson County are higher than in many other areas of the country. We have looked at the data and the data corroborate that there is a severe cost problem in our community. An analysis of these data indicate that the increased cost in our area is due, in large part, to an unusually high number of hospital admissions for our population. Our demographic, socioeconomic, and environmental considerations might account for some of the excess admissions, but data are too compelling for us to avoid the probability that some of us are placing patients in the hospital unnecessarily. Excessive use of the hospital may result from practice habits and could be influenced by presence of excessive hospital beds and from prevailing mechanisms for reimbursement. While each of us may not totally agree with the conclusions, or proposed actions of our group, we can ignore them only at our peril. There may be questions as to why our medical society should become involved in this issue. We believe there are compelling reasons for this action. They relate both to the public interests and to the self-interests of our profession. Among these are preservation of our leadership in the health care system. We jealously guard our role of leadership. If physicians do not address these issues, those who do will gain ascendancy at our expense. Fiscal responsibility. There’s no need to describe the perilous state of our nation’s economy or the reasons for it. Unrestrained spending is a

practice we physicians are quick to condemn in others, especially when the funds expended are public. We have the opportunity to provide a good example by discipline with the way in which we direct the expenditure of public and private funds for medical care. Not that medical service should be withheld from anyone, but that all services provided should be medically indicated and provided in the least costly way consistent with good patient care and preservation of traditional practice. While our medical society takes no position of the various proposals for alternative methods of organization, it is apparent that many of our members personally prefer to practice in the traditional mode characterized by freedom of choice by patient and physician, and by fee for service. Those who wish to preserve this system must see that it does not price itself out of the market.

It then laid out a whole series of measures of utilization review and others that concluded with this statement: "There are, of course, other actions that can be taken by government, business, labor and the public to reduce the demand for the cost of health care. However, our responsibility as physicians is to address first those things for which we can provide some remedy. The problem is defined, the alternative is clear, the decision is ours." And being implemented now in Jefferson County, Birmingham, Ala., is a very substantial program of change in medical practice. Those kinds of pressures are occurring everywhere in virtually every city of the country now. Government, industry, and public forces are coalescing to raise the same issues of concern with their providers, and the same change will be demanded. As I said, the AMA is to be commended for being the force behind the open, honest assessment of those issues. But the end-result of all these forces will be obviously to cut the growing use of total medical resources, particularly hospital inpatient care. I think that it's reasonable to assume that the next step industries and unions will take will be to preferentially bargain with and utilize efficient providers and insurers and, in some instances, put penalties on those who insist on utilizing unnecessarily expensive or inefficient delivery systems. In fact, just this week it was reported from Washington that the Senate Finance Committee is considering, in fact has decided, to eliminate the freedom for Medicaid beneficiaries to choose any provider they wish, limiting them instead to providers that states feel give the best low-cost service. And, frankly, I believe that the private sector will soon follow suit. In fact, in some areas of the country it is already beginning to happen.

So, the system is beginning to change. Bed growth is slow; ambulatory care is growing

rapidly. The number of hospitals is decreasing. Hospital bankruptcies are occurring and the interesting thing is that that is no longer deemed automatically intolerable by society. The fact is that government is developing policies to pay for bed closure. Hospital mergers and consortia developments are increasing in an attempt to obtain efficiencies, economies, and to control markets. You, in Nashville, have the site of one of those for-profit corporations rapidly bringing hospitals together, merging them. The University of Chicago recently predicted that it would not be unreasonable to assume that within ten years, all of the hospitals in the United States would be controlled by about ten corporations.

Those are the kinds of changes that are occurring in front of our eyes. The corporate practice of medicine is increasing. Doctors are banding together in groups. You know of the move to group practice. We are already seeing and soon will be seeing more instances of groups of doctors bargaining with hospitals for preferential per diem rates. The physician glut, which we are in the midst of and which will become more serious, will be to the point soon where we will have one doctor for about every 500 Americans. To get some idea of what's going to happen in competition when that occurs, we are already seeing competition in communities of this country where there is a marked overabundance of specialists and they are having difficulty making ends meet. In fact, the *AM News* reported recently in a major headline "Hard Times Ahead for Physicians."

Other dramatic changes are occurring. You know about the move to advertising. There is evidence now that advertising is lowering costs. Dentistry is being practiced in drugstores. Medicine probably will not be far behind. The once frail HMO movement is rapidly undergoing explosive growth. *Business Week* reported recently a banner headline "A Bright Prognosis for the Once Frail HMO," and reported that, because major industries such as IBM, DuPont, General Motors, Ford, and other giants, see that as a cost containment strategy that will not sacrifice quality, and therefore big dollars are moving into that area.

I've talked to you about the HMOs and pointed out that the latest studies that I have seen predict that soon there might be almost 16 million to 20 million Americans enrolled in HMOs. The city of Boston, the bastion of private practice in

the past, now has nine HMOs actively competing. Richmond, a conservative medical community, has just had announced by Prudential Insurance that an HMO feasibility study will be done. So we're living, really, in revolutionary times. And even despite that, even more dramatic change is being demanded, and I would talk here about some of the efforts at the federal level to move to a competitive approach in the health care system. The interesting thing is that the move has bipartisan support. Republicans and Democrats alike are saying "Traditional regulation of itself is unlikely to be as effective as necessary. We've got to couple it with some different thing that could be competition"; and now there is very serious discussion to get what Stockman, Senator Durenberger, and others believe would create a competitive system. The marketplace demands that a system or a combination of systems must provide quality health care. It will reject those who cannot achieve that efficiently. The combination of regulation and competition we will see increasing in the future is going to be hard on many people; it's going to be fatal to some. To those institutions and physicians who are willing and able to respond, I believe that there are remarkable opportunities. For no matter what happens, over 200 million Americans will continue to need medical care. They will, however, demand it to be delivered in a substantially different way.

What does this all mean to the health care system and to you and me as physicians? Well, there is no doubt that major forces are at work and that major problems currently exist. You will first have to determine how many of those problems exist where you practice and then determine individually, and probably collectively, what your role is in their cause and in their resolution. We will be expected as a profession to examine ourselves. Given society's needs, are our practice models the model of the future? Will we be relevant in the '80s? Are we, as physicians, at work on the resolution of the major problems? Are we ready and can we withstand the careful scrutiny to which the rest of the system is already being increasingly exposed? And, will we be viewed as a part of the problem or part of the solution? I don't know the answers to those questions but I don't believe we can ignore them as we contemplate the future. For profound change is occurring. It will accelerate with or without legislation. Competition is the future; it will ac-

celerate. And we will probably never return to the operative patterns of the past. Growth of health care expenditures, in my view, cannot continue at the present rate. The future will require us to make do with less. Society is not going to let us price ourselves out of the health care market. The major buyers will demand change. They are deadly serious. They have no choice. For their very survival is also at stake; and they mean to survive. They are determined to use their leverage. They will write the detailed purchase orders for medical care and they will become very, very prudent buyers. Complete freedom of choice at industry's or government's expense in health care will soon be history.

Ladies and gentlemen, there is obviously much that is very good about our health care system, and of which we can be very proud. But there is also room for substantial and constructive change. There is every indication that society and its elected representatives have about reached the limits of their tolerance for ever greater investments in the health care system. They are looking to us for response and for change. And the one thing that we cannot do in response is obviously to continue the status quo. There is hardly a force on the American scene today—government, business, labor, organized consumer groups, and many of our fellow physicians—willing to accept a business as usual approach to the problem of the medical care delivery system and its cost. We, as physicians, can do better than argue for the status quo or a return to the good old days. By accepting the need for change, we can help bring it about, unleashing the talents, the substantial skills, and the thoughts of the private sector. We can have change by appropriate modification of our practice pattern by insisting on the restructuring of tax laws and payment systems which will bring to the medical care system some honest incentives for consumers, providers, and government alike. The alternative to that is the dead hand of government which stifles needed change, does not recognize or tolerate differences, and once in place is rarely removed. I choose to continue to work to bring changes that will make unnecessary further governmental regulations. I believe with all the troubles I have described, there is still a remarkable opportunity for us as physicians to provide leadership and to look after the needs and interests of society, and, in so doing, assure the continued existence of a free and inde-

pendent medical profession and the continued existence of a quality health care system. But the status quo will not be permitted, change will come, the issue is no longer will there be change. The only issue left is, how will that change manifest itself?

I shudder to think of the alternative should we fail to become involved in the solution of the current problem. For the times are certainly a-changing. We are all on the firing line. We face very troubled days ahead when we work in the health care system. They won't be boring. They

will certainly be exciting. But the real blessing is that with problems opportunities are always created, and I believe that there are remarkable opportunities for those of us who understand the changing environment, are prepared to change, and willing to serve. I believe our fellow physicians in Birmingham said it very well:

Those who wish to preserve our system of private practice must see that it does not price itself out of the market. Our responsibility as physicians is to address those things for which we can provide a remedy. The problem is defined. The alternatives are clear. The decision is ours. 

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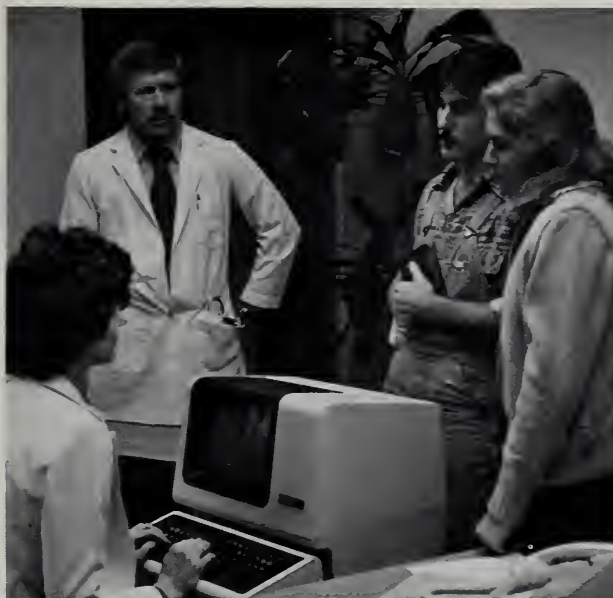
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Coronary Disease With and Without Risk Factors

CHARLES E. KOSSMANN, M.D., Editor

KERRY H. KING, M.D.:

A 40-year-old black woman developed acute shortness of breath and right-sided pleuritic chest pain on Oct. 19, 1980, one day after discharge from the hospital where she had been admitted two weeks earlier for acute anterolateral myocardial infarction.

Angina had begun at age 27, and an initial myocardial infarction occurred in 1973 when she was 33 years of age. She had a three-vessel coronary-venous bypass graft performed in 1974. Postoperatively thrombosis of a brachial artery occurred requiring thrombectomy. She did well until Oct. 3, 1980 when chest pain recurred caused by further myocardial infarction in the hospital just preceding the present admission.

The family history was significant in that her mother died at the age of 47 of myocardial infarction.

A hysterectomy was performed in 1967 at age 26 but the ovaries were left intact. Mild hypertension had apparently been noted in the past for which she received methyl dopa irregularly. She smoked between the ages of 17 and 35. She had had a borderline hyperlipidemia type IV in the past.

She was a well developed and nourished black woman, weight 142 lb, slightly tachypneic. The pulse rate was 92 beats per minute, blood pressure 120/60 mm Hg, respirations 24/min. There were bilateral basilar rales. In the heart an S₃ and a grade IV/VI systolic murmur were heard along the left lower sternal border; the murmur radiated to the axilla.

A ventilation-perfusion scan showed perfusion defects in the right lower lobe and left apex. The serum cholesterol was 219 mg/dl and the triglycerides 156 mg/dl. Platelets were normal in number. The high-density lipoproteins, blood type, and glucose tolerance were not determined. The blood glucose was 100 mg/dl.

The diagnoses were (1) Pulmonary embolization with multiple infarcts; (2) Cardiac: (a) atherosclerosis and iatrogenic cardiac disease; (b) enlarged heart, coronary sclerosis with multiple occlusions and infarctions, triple venous bypass grafts with possible occlusion; (c) normal sinus rhythm, left ventricular failure; (d) class IVE improved to class IIC.

JAY M. SULLIVAN, M.D.:

It is becoming increasingly obvious that elevated serum cholesterol, high blood pressure, and smoking are not the only factors associated

with atherosclerotic heart disease. There are a number of other so-called minor risk factors, some of which are not correctable. Factors previously thought to represent chance associations are receiving new attention as possible causal factors. Analysis of the number of heart attacks, strokes and other atherosclerotic vascular events that can be accounted for by the known major risk factors reveals that many heart attacks cannot be explained by these factors alone. The number of exceptions is so great that the American Heart Association is starting a thrust toward discovering presently unrecognized risk factors. In a brief film produced by the Association for fund-raising purposes, a famous young tennis player says:

I don't smoke. I don't have high blood pressure. I can never have a heart attack, right? Well, I did. I'm Arthur Ashe. Ever wonder why a young person with no obvious risk factors has a heart attack? It is one of the goals of American Heart Association research.

When epidemiologists first started looking for factors associated with an increased risk for coronary disease, they found some glaring discrepancies. When early studies revealing a low incidence of coronary atherosclerosis among Puerto Rican men, in Japanese men in Japan, Hawaii and California, and among certain white men in North America were analyzed, it was found that there was a measurable incidence of heart disease that could not be explained by age, cholesterol levels, cigarette smoking, or abnormal blood pressure. Some individuals and some groups seemed to have heart attacks more frequently than others. They obviously had some kind of risk factor other than the known ones. It was thought at first that a family history of atherosclerosis would be important; if you were born with the wrong genes you were likely to have a heart attack. In general that is true but the wrong genes really seem to manifest themselves mostly through known risk factors, i.e., individuals with a strong family history of premature

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Presented Jan. 7, 1981.

heart attacks usually have a family history of high serum cholesterol or hypertension. Let's review some of the known risk factors and then focus on the patient presented today and see where she fits into the overall scheme of things.

Major Risk Factors

Because coronary heart disease occurs so widely and with such a high frequency in certain populations around the world, the epidemiologists have had the opportunity to study various factors present in the people who develop the disease. With such analyses, they have been able to dissect out a number of risk factors.¹

One of the first is *age*. In both white and non-white men the incidence of coronary heart disease rises with age. Obviously not much can be done about it, at least not until additional work is done on aging. *Race* makes a difference. Black women have always had a higher attack rate than white women, and prior to 1968 white men had a higher attack rate than black men but something has happened since then to reduce or erase those differences. One of the causes for the change was introduction of separate coding for death from ischemic heart disease and death from hypertensive heart disease, a change in collecting vital statistics which took place in 1967. Now, up to the age of 65, there is a higher death rate from coronary heart disease among blacks than whites.

Sex makes a difference. Young white men run a 5.2 times higher risk of coronary disease than young white women; among older people the male dominance falls to 2.3 fold. Among blacks this sex differentiation also exists but is not as great.

Geography shows very interesting differences in the incidence of heart disease around the world. The highest attack rate is in Finland and the next highest in various English speaking countries on all parts of the globe. Somehow habits, genetics, or both are playing a role in these countries. There are some countries that traditionally have relatively low rates of coronary heart disease, some of which have low consumption of fats, others relatively high consumption. The Swiss diet is high in dairy products and chocolate, and contains a high content of saturated fats, but the Swiss incidence of heart disease is not unusually high. Even among the people of the United States there are marked geographic differences in the frequency of heart disease. Our patient today is more likely to have

heart disease than a white woman of the same age. Living in the United States gives her a better chance to have coronary heart disease, and in the southeastern portion a greater chance than elsewhere. The southeastern high-frequency area is a band that stretches across the south Atlantic states and extends through Georgia and Alabama. Shelby County of Tennessee is in that band where heart disease occurs with great frequency compared to Miami, Los Angeles, or Boston. We don't really know the reasons for this.

The *time* in which the subject lives makes a difference. In the early 1960s the death rate from coronary and all other forms of cardiovascular disease was much higher than it was in 1975 or 1980. The patient started to have angina about 13 years ago when the overall attack rate was much higher. She was developing her disease at a time in the history of the United States when something was going on in the country which made coronary disease more likely.

One of the items that has received most attention through the years is the association of a high serum *cholesterol* with coronary atherosclerosis. It is indisputable that the higher the level of cholesterol in the blood the more likely is a heart attack to occur, a gradient type of relationship. One of the misconceptions going around is that a serum cholesterol below 250 mg/dl is normal. Actually the dividing line is not that sharp. If subgroups with lower cholesterol are studied it is found that there is a continuum of risk, a gradual slope which shows a sharp rate of rise after a level above 250 mg/dl of cholesterol is reached. In Japan normal adults ordinarily run serum cholesterol levels around 180 mg/dl. In experimental animals a regression in experimentally produced atheroma cannot be induced until serum cholesterol has been lowered to about 150 mg/dl. Often you hear that the lipid profile was normal and, therefore, the heart attack under consideration cannot be ascribed to that factor. The patient today had a serum cholesterol level of 219 mg/dl. By itself that is normal, but considering the gradient relationship mentioned above she is in a group that might be anticipated to have an above-average risk of getting coronary disease.

The serum cholesterol is not the whole story relative to the role of lipids in generation of heart disease. A negative risk factor among lipids has been discovered just recently.^{2,3} For many years, electrophoretic means have been available to

measure *high-density lipoprotein* (HDL). They seemed relatively stable in most individuals. On closer examination of epidemiologic data a strong negative correlation was found between the serum levels of HDL and the frequency of coronary disease in a certain studied population. As a predictor of coronary heart disease, HDL is eight times more efficient than total cholesterol and four times better than the level of low-density lipoprotein (LDL), the principal agent for transporting cholesterol esters in the plasma. The risk imposed by cholesterol is obviously strongly modified by the level of the HDL. It is a negative risk factor which, if absent, increases the risk of having a heart attack.

The HDL is one thing we don't know about our patient. It really might be the answer to her story because it is a strong inverse risk factor. Maybe she is from a family that has relatively low levels of HDL. There are a few associations of both high and low levels of HDL. In women it is ordinarily higher; that might explain the sex difference in atherosclerotic heart disease, because we really haven't explained otherwise why women have fewer heart attacks than men. A lean body and family predisposition are associated with increased levels of HDL, as are administration of estrogens, nicotinic acid, heparin, and alcohol. Decreased levels are found in men. They are also found when you allow yourself to gain weight. High carbohydrate diets, uncontrolled or poorly controlled diabetes mellitus, and certain hereditary states are associated with low levels of HDL.

Lipoprotein typing enables us to categorize patients into types I to V. The type IIs and IVs are each divided into subgroups, but in any attempt to estimate risk imposed by the individual components of these subgroups, e.g., how much risk is caused by pure elevation of blood triglyceride when evaluated in terms of the associated slight elevation of blood cholesterol and the associated level of HDL or LDL, the significance of the single component is reduced. Some epidemiologists⁴ have concluded that the triglycerides either have no predictive value by themselves or are a weak risk for the development of coronary heart disease. Our patient had 156 mg/dl of triglycerides; that low value obviously did not explain her coronary artery disease.

Blood pressure plays a most important role and the risk of developing coronary heart disease really starts at a relatively low level. This, once again, is a continuum of risk among both men

and women: the higher the blood pressure the greater the risk. I won't go into all the data accumulated in the Hypertension Detection and Follow-up Program recently published,⁵ but it shows that hypertensive patients who have diastolic pressures treated down to the level of 82 mm Hg over a five-year period have fewer heart attacks, strokes and bouts of congestive heart failure than patients whose diastolic pressures are lowered by therapy to only 89 mm Hg. The differences are in the range of 20% to 50% for the various morbid events. Therefore, the "minor" elevations of blood pressure which apparently occurred in this woman in the past may have played a role in the initiation of her coronary atherosclerosis.

Cigarette smoking, of course, makes a major difference, and if she did smoke at one time that could have started her on the road to coronary heart disease. If asymptomatic people stop smoking, the risk relative to coronary heart disease seems to disappear after two years. However, if someone has already developed extensive cardiovascular disease then I doubt that the calcified fibrotic lesions are going to remit simply because smoking has been given up.

The frequency of coronary heart disease is increased in both sexes if they have *diabetes mellitus*. This we have known for some time but epidemiologic studies are now suggesting that even *impaired glucose tolerance* will increase the risk, that among men there is a 50% increase in the risk of heart disease and among women the incidence is doubled. In fact, if a woman has glucose intolerance the usual protective effect of her sex is lost. So, this is a very powerful kind of risk factor that might be of importance to this patient.

Rarer Associations of Coronary Disease

Patients with gouty arthritis have twice the expected rate of coronary heart disease. There is also an association between coronary atherosclerosis and *serum uric acid levels*. Elevated uric acid is often associated with high cholesterol, high triglycerides, and hypertension. Thus, uric acid as an independent risk factor doesn't seem to have much power. The menopause starts a woman on the path of a greater frequency of coronary heart disease in susceptible populations. *Oral contraceptives* seem to play a role in risk, particularly when they interact with other risk factors such as age over 40 years, smoking, hypertension, or diabetes.

Indeed if the whole slate of risks is accompanied by the use of oral contraceptives, the coronary sclerotic process will be accelerated. *Obesity* plays little role other than its frequent association with other risk factors, such as elevated blood pressure and lipid abnormalities. Obesity by itself is a minor risk factor; it does lower HDL and is undesirable from that point of view.

Physical activity is a topic in itself. A number of studies have shown that among comparable subgroups, the people who exercise less have more heart attacks than those who exercise more. For example, in London the bus conductors who run up and down stairs collecting tickets had fewer heart attacks than the motormen who sit at the wheel driving.⁶ Among longshoremen, those who do heavy work every day for long periods of time have fewer heart attacks than those who sit at a desk.⁷

Personality behavior has been associated with heart attacks.⁸ You have heard of the type A personality, the person with an enhanced sense of time urgency, who can't stand waiting in line, cannot resist prompting a colleague's hesitation on words by completing sentences for him—that type of individual has twice the risk of having a heart attack than the person who can sit back and let nature take its course as it were.

There are some other physiologic and social risk factors that have been identified but they are hard to quantitate. *Social mobility* for example: people from deprived backgrounds who become financially successful tend to have a higher frequency of heart attacks. *Incongruity* of status: people who have one foot in each socioeconomic class tend to have an increased risk of heart attack. *Anxiety, neuroticism*: lack of support from stress may be a risk factor. It really can't be said what role any of these played in our patient.

The excessive dietary *consumption* of *cholesterol* and *saturated fat* is associated with heart attack; it seems to act through the serum lipids. *Carbohydrate consumption* has been implicated because industrial societies use much more sucrose, glucose and other refined sugar than nonindustrialized countries and have a correspondingly higher heart attack rate. However, it doesn't seem to hold up when other risk factors are considered. *Excessive salt intake* is associated with increased heart attacks probably acting through the related hypertension. Alcohol consumption appears to be inversely related to the frequency of heart attacks and that appears to act through its stimulatory effect on HDL. Cof-

fee ingestion has been implicated but when examined critically appears to be a risk factor mainly in those who smoke. The drinkers of excessive coffee turn out to be the ones who also have a cigarette with their coffee. It is probable that coffee in itself does not have a strong effect on the incidence of heart disease.

An interesting aspect of the epidemiology of heart disease around the world has to do with the *hardness of water* and the content of *trace metals*. These are unknown risk factors that require careful future investigation. All over the globe, the harder the water the lower the incidence of coronary heart disease for some strange reason. Hardness is a general term; the water can be "hard" from a high content of any number of minerals. Magnesium, chromium, selenium, and zinc have all been suggested to offer some protection. Cadmium, magnesium, and lead are considered to be relatively harmful.

There are some other rather odd items whose association with risk cannot be readily explained. Vital capacity is inversely related to heart disease. Blood type plays a role; the type As are more likely to have a heart attack than type Os. Coagulation factors have proven to be a disappointment. No one has ever been able to confirm that any hypercoagulable state plays a role in the development of coronary disease.⁹ It may be that once disease of the heart has occurred, hyperactive platelets, if present, are likely to cause thrombosis and infarction but this is a problem with which investigators have struggled without a conclusive answer. Our patient is somewhat different in that she had pulmonary emboli, probably closed off a bypass graft, and had occlusion at the site of a peripheral arteriotomy in the past. There might be a separate platelet problem that is causing her to have recurrent coronary thrombosis. *Increased blood viscosity* from any cause, i.e., the nephrotic syndrome with plasmapheresis, is associated with accelerated atherosclerosis. There are various *autoimmune states* that seem to be related. Patients who have autoimmune thyroiditis are more likely to have coronary artery disease for reasons that aren't understood. People who have active rheumatoid arthritis have less frequent coronary heart disease than expected, which may be due to their consumption of aspirin. Although in the Myocardial Infarction—Aspirin Trial¹⁰ the drug was found to have no significant beneficial effect in the secondary prevention of heart disease, it may be that it has a primary action if taken regularly from an

early age. *Mediastinal radiation, ear lobe creases*, exposure in industry to *carbon disulfide* favor the development of coronary atherosclerosis. Workers exposed to *aliphatic nitrates* in industry, as in dynamite factories, have also been found to have an increased frequency of coronary heart disease.

These, then, are the odd factors possibly related to risk. There are most likely others that have not yet been identified. Possibly they are masked by the major ones and probably there are combinations that are not understood. A combination such as exposure to carbon disulfide, an ear crease, and consumption of oral contraceptives may be deadly but this is at present speculative and to be sorted out by future research.

There are a couple of other points I want to make relative to the future. Our patient had atherosclerosis, but myocardial infarction can occur in individuals by a nonatherosclerotic route. It now seems clear that an angiographically normal coronary artery can undergo intense vasospasm leading to infarction. When a patient is encountered with acute myocardial infarction without obvious risk factors or evidence of atherosclerosis elsewhere, this possibility must be considered, particularly in relation to therapy.

Diet and Prostaglandins

There is some evidence that previously unsuspected items in the diet might play an important role in the development of atherosclerosis. Eskimos, for example, tend to have fewer heart attacks, and in northern Europe during World War II the incidence of heart attacks fell. People didn't eat much meat because of its unavailability; they were forced to eat a fair amount of fish, primarily menhaden and other members of the herring family that could be caught close to the coast of Norway. It now turns out that one of the components of fish may modify prostaglandin metabolism in such a way as to inhibit platelet activity and provide protection against thrombosis and possibly against the development of atherosclerosis.¹¹ When platelets are stimulated arachidonic acid is released by the activity of a phospholipase in the membrane, leading to formation of endoperoxides and finally of a compound called thromboxane A₂, a vasoconstrictor that also stimulates platelet aggregation. In contrast, within blood vessel walls the same series of events leads to the formation of an endoperoxide which proceeds to the formation of prostacyclin or prostaglandin I₂, a vasodilator which inhibits

platelet aggregation. In fact, it is now thought that it is this compound that plays a large role in keeping us from having generalized intravascular clotting when subjected to any kind of injury. Dietary eicosapentaenoic acid from the oils of fish that live in northern European coastal waters is incorporated into the phospholipids of cell walls. Regular arachidonic acid will not be formed, but a derivative of it from which platelets, when stimulated, will form thromboxane A₂, a much less potent compound with far less tendency to enhance aggregability of platelets than thromboxane A₂. At the same time a derivative of prostaglandin I₂, which does not lose the biologic activity of the original, is formed. It is possible that some people eat the wrong food, making platelets more active, or that some people eat the right food, such as the eicosapentaenoic acid in fish, that makes them more resistant to the development of coronary atherosclerosis. Such biochemical nuances act as variables which confound the interpretation of such risk factors as blood cholesterol and cigarette smoking in patients with heart disease.

Unfortunately we can't all go out and start ingesting the eicosapentaenoic acid right away. About eight ounces of cod liver oil or a couple of pounds of herring per day are required to affect arachidonic metabolism. That's fine if you are a seal, but many of us are brought up with different dietary habits and preferences. I don't think we can advocate excessive consumption of fish oils as a way of escaping the atherosclerotic effects of other risk factors at this time.

REFERENCES

1. Levy RI, Feinleib M: Risk factors for coronary artery disease and their management, in Braunwald E (ed): *Heart Disease, A Textbook for Cardiovascular Medicine*. Philadelphia, WB Saunders, 1980, pp 1246-1278.
2. Kannel WB, Castelli WP, Gordon T: Cholesterol in the prediction of atherosclerotic disease. New perspectives based on the Framingham Study. *Ann Intern Med* 90:85-91, 1979.
3. Towne TC, Sabesin SM: Hyperlipidemia and low HDL cholesterol. *J Tenn Med Assoc* 73:641-648, 1980.
4. Hully SB, Rosenman RH, Bawol RD, et al: Epidemiology as a guide to clinical decisions. The association between triglyceride and coronary heart disease. *N Engl J Med* 302:1383-1389, 1980.
5. Hypertension Detection and Follow-up Program Cooperative Group: Five-year findings of the hypertension detection and follow-up program. *JAMA* 242:2562-2576, 1979.
6. Morris JN, Kagan A, Pattison DC, et al: Incidence and prediction of ischemic heart disease in London busmen. *Lancet* 2:553-559, 1966.
7. Paffenbarger RS, Hale WA: Work activity and coronary heart mortality. *N Engl J Med* 292:545-550, 1975.
8. Friedman H, Rosenman RH: *Type A Behavior and Your Heart*. New York, Alfred A. Knoff, 1974.
9. Salky N, Dugdale M: Platelet abnormalities in ischemic heart disease. *Am J Cardiol* 32:612, 1973.
10. Aspirin—Myocardial Infarction Study Research Group: A randomized, controlled trial of aspirin in persons recovered from myocardial infarction. *JAMA* 243:661-667, 1980.
11. Dyerberg J, Bong HO, Stoffersen E: Eicosapentaenoic acid and prevention of thrombosis and atherosclerosis. *Lancet* 2:117-119, 1978.

EKG of the Month

W. BARTON CAMPBELL, M.D.

A 42-year-old man was admitted to St. Thomas Hospital after sudden onset of numbness and pain in the left arm and chest. The blood pressure was 150/110 mm Hg. An electrocardiogram showed inferior infarction with .04 second Q waves and ST segment elevation in leads II, III and aVF. Twenty-four hours following hospitalization the CPK rose to 2,183 (upper limits of normal 200 IU) with a CPK 2 of 33%. He was placed in a monitored bed in the progressive care area and given isosorbide dinitrate (Isordil) and low doses of heparin. On the second hospital day a rhythm strip was obtained (Fig. 1).

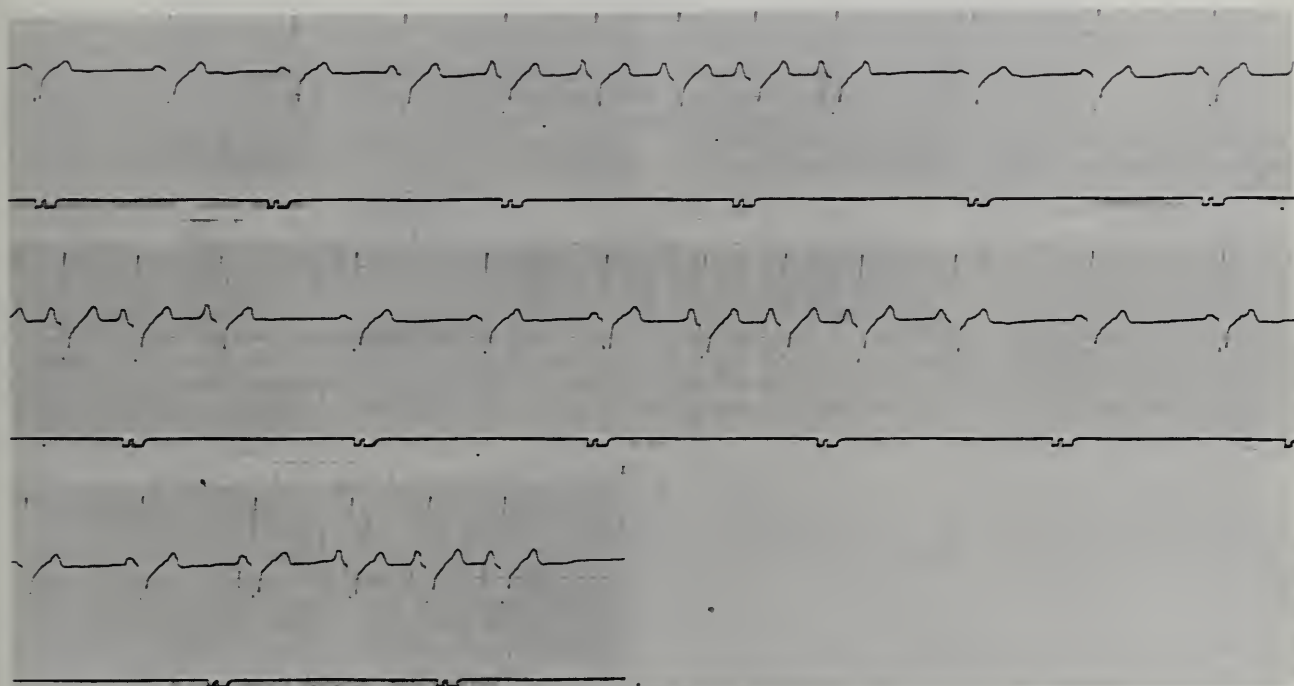


Figure 1

Discussion

The rhythm strip shows P waves preceding all QRS complexes with a P-R interval of 0.14 seconds. The rhythm is irregular but has a periodicity. Except for the last beat in three of the cycles a progressively shortening P-P interval precedes abrupt lengthening of the P-P interval which ends

the cycle. In the four clusters of beats shown in Figure 1 many P-P intervals are identical. Each group of four beats has a P-P interval of 0.68 seconds within the cluster and other intervals (0.64 seconds, 0.95 seconds, 0.86 seconds, and 0.80 seconds) appear frequently. The first P-P interval in each group varies by less than 0.04 seconds. The lengthened P-P interval at the end of the cycle is always less than twice the shortest interval in the group.

Progressive shortening of intervals which are

From the Department of Cardiology, St. Thomas Hospital, Box 380, Nashville, TN 37202.

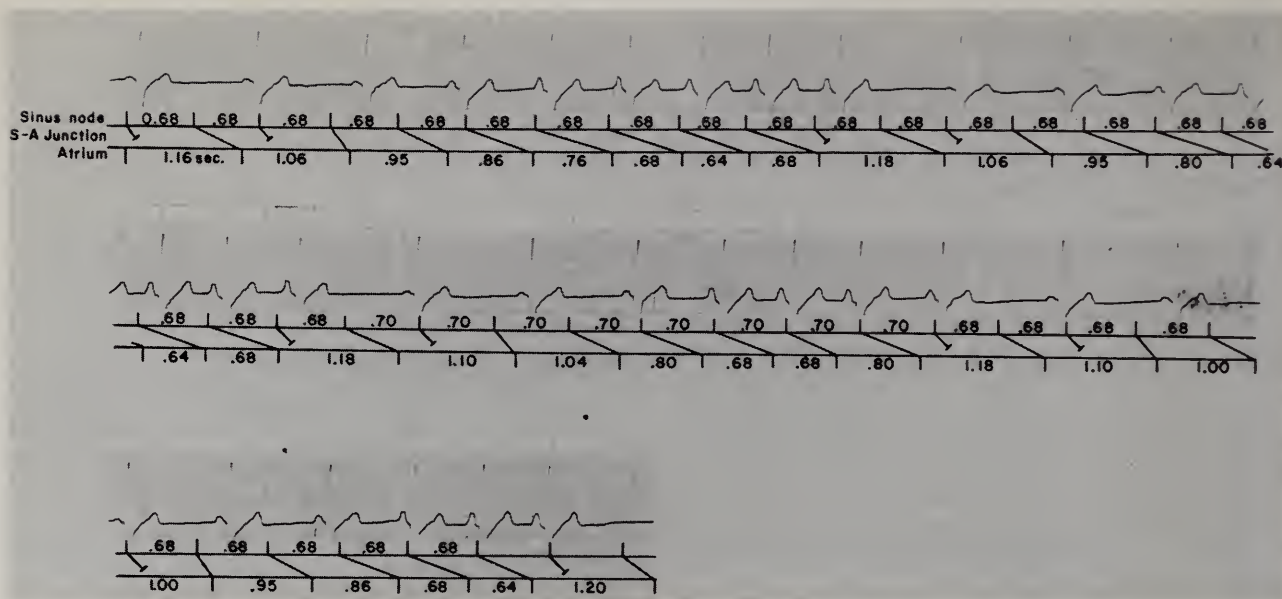


Figure 2

recapitulated in groups is characteristic of the Wenckebach phenomenon and can occur at any location in the conduction system. In this patient, Wenckebach block occurs after sinus node depolarization but before atrial depolarization. This is diagrammatically outlined in Figure 2.

Cyclical variation of P wave morphology is present with taller peaked P waves accompanying the shorter P-P intervals in each cycle. This varying configuration suggests Wenckebach involvement of intra-atrial conduction tissue.

Shortening P-P intervals are present because the increments from sinus node to time of atrial capture are progressively less. This shortening of intervals can easily be understood in AV nodal Wenckebach where P waves and QRS complexes are present. Although the P-R interval progressively lengthens in AV nodal Wenckebach until a beat is dropped, the lessening of each successive increment has the effect of shortening the R-R interval so that the ventricular rate is progressively faster until the dropped beat. Shortening intervals are characteristic of Wenckebach at any location but as is noted in this patient the shortening is often not homogenous. Thus, in the first three cycles the last interval prior to the dropped beat is actually slightly increased. (The dropped P wave is represented by the longest interval at the beginning of each cycle as shown in Figure

2.) Only in the last cycle do we see continual shortening from 0.68 to 0.64 until the beat is dropped.

Atrioventricular Wenckebach block is commonly seen following inferior myocardial infarction. Sinoatrial Wenckebach block is much less commonly recognized. The classic hallmarks of sinoatrial Wenckebach block are recurring cycles of progressive P-P interval shortening followed by a pause less than twice any P-P interval within the cycle.¹ Wenckebach periodicity is commonly slightly atypical and lack of homogenous repetition from cycle to cycle is often present.²

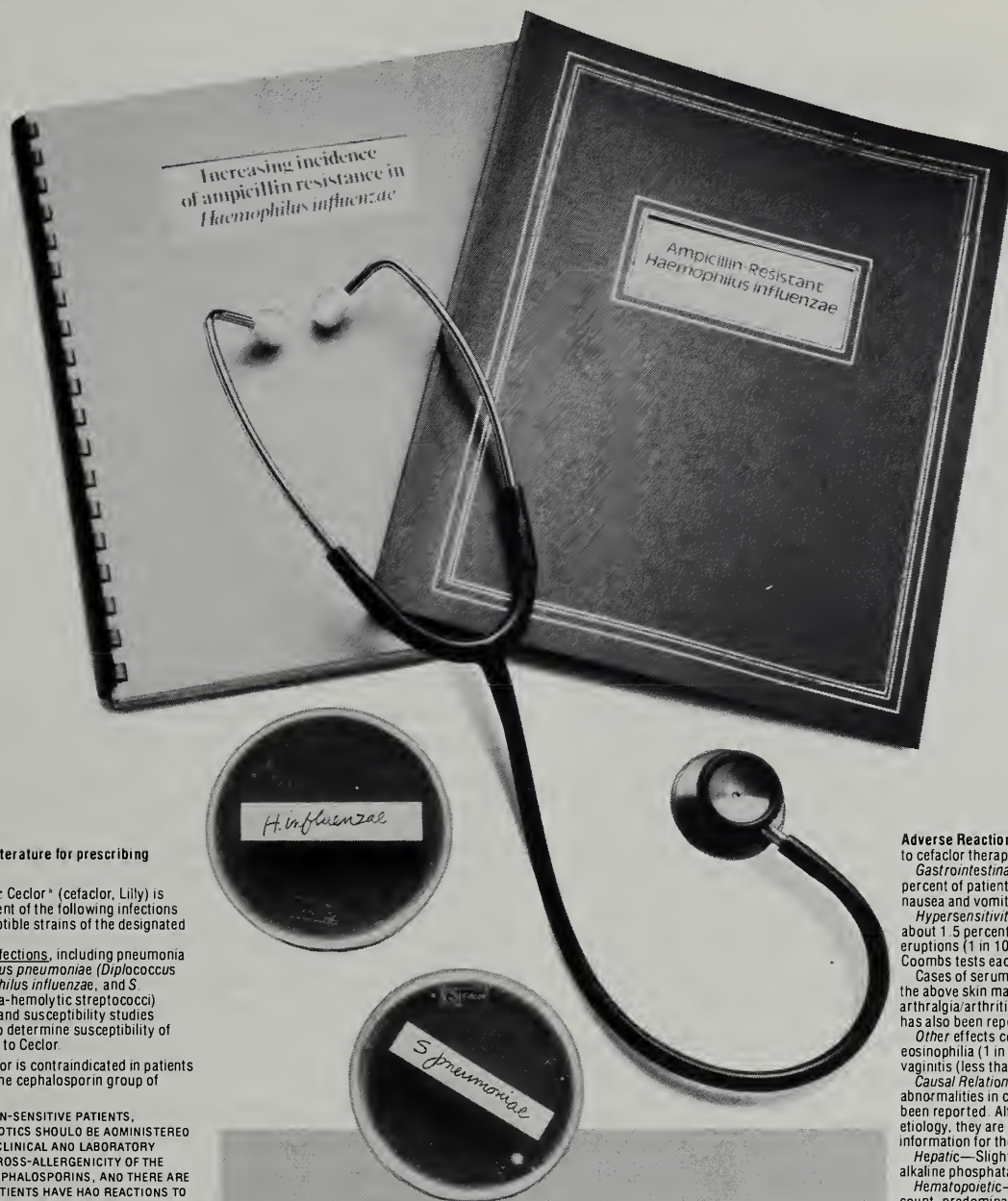
This patient was found on coronary arteriography to have occlusion of the right coronary artery proximal to the origin of the sinus node branch. Atropine 0.6 mg intravenously produced abrupt cessation of the Wenckebach periodicity. No rhythm problems recurred and he was discharged on oral isosorbide dinitrate and a progressive exercise program.

DIAGNOSIS: Sinoatrial Wenckebach block.

REFERENCES

1. Shamrock L, Dove E: Wenckebach phenomena in sinoatrial block. *Br Heart J* 28:350-358, 1966.
2. Denes P, Lavy L, Dick A, et al: The incidence of typical and atypical AV Wenckebach periodicity. *Am Heart J* 89:26-31, 1975.

An added complication... in the treatment of bacterial bronchitis*



Brief Summary. Consult the package literature for prescribing information.

Indications and Usage: Cefaclor* (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae* (*Diplococcus pneumoniae*), *Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci). Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Cefaclor.

Contraindication: Cefaclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS TO BOTH DRUG CLASSES (INCLUDING ANAPHYLAXIS AFTER PARENTERAL USE).

Antibiotics, including Cefaclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Precautions: If an allergic reaction to cefaclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of cefaclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug.

Cefaclor should be administered with caution in the presence of markedly impaired renal function. Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Cefaclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinistest* tablets but not with Tes-Tape* (Glucose Enzymatic Test Strip, USP, Lilly).

Use in Pregnancy: Although no teratogenic or antifertility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established. The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus.

Use in Infancy: Safety of this product for use in infants less than one month of age has not been established.

Some ampicillin-resistant strains of *Haemophilus influenzae*—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Cefaclor.¹⁻⁶

In clinical trials, patients with bacterial bronchitis due to susceptible strains of *Streptococcus pneumoniae*, *H. influenzae*, *S. pyogenes* (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Cefaclor.⁷

Cefaclor®

cefaclor

Pulvules®, 250 and 500 mg

Adverse Reactions: Adverse effects considered related to cefaclor therapy are uncommon and are listed below:

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70) and nausea and vomiting (1 in 90).

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs tests each occur in less than 1 in 200 patients.

Cases of serum-sickness-like reactions, including the above skin manifestations, fever, and arthralgia/arthritis, have been reported. Anaphylaxis has also been reported.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

[103080R]

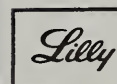
*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H. influenzae*.

Note: Cefaclor* (cefaclor) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

References

1. Antimicrob. Agents Chemother., 8: 91, 1975.
2. Antimicrob. Agents Chemother., 11: 470, 1977.
3. Antimicrob. Agents Chemother., 13: 584, 1978.
4. Antimicrob. Agents Chemother., 12: 490, 1977.
5. Current Chemotherapy (edited by W. Siegenthaler and R. Luthy), II: 880. Washington, D.C.: American Society for Microbiology, 1978.
6. Antimicrob. Agents Chemother., 13: 861, 1978.
7. Data on file, Eli Lilly and Company.
8. Principles and Practice of Infectious Diseases (edited by G. L. Mandell, R. G. Douglas, Jr., and J. E. Bennett), p. 487. New York: John Wiley & Sons, 1979.



Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285. Eli Lilly Industries, Inc., Carolina, Puerto Rico 00630

100061

Painful Diabetic Peripheral Neuropathy

Alan L. Graber, M.D. (endocrinologist—St. Thomas Hospital): The patient is a 39-year-old man who has had diabetes for five years. He was treated with diet for the first two years, but was hospitalized and started on insulin after he experienced a syncopal episode while driving. He drove into an embankment, and was unconscious for two hours. Until insulin was started the diabetes had been poorly controlled, but subsequently he has remained in excellent control, and most glycosylated hemoglobin values have been under 9% (normal, less than 8.5%). About a year after the onset of diabetes he developed severe pain in the feet and legs accompanied by paresthesias and numbness. The symptoms started in the right foot, spreading then to both feet, and he became depressed. A year later he fell in the snow and injured his back, but the subsequent back pain had been fairly well controlled by ibuprofen (Motrin). He had been tried on numerous analgesics for his leg pain—phenytoin (Dilantin), carbamazepine (Tegretol), tricyclic antidepressants, phenothiazines, monoamine oxidase inhibitors, and other medications, none with any benefit. Currently, he is taking doxepin, 50 mg three times daily, and haloperidol (Haldol), 1 mg three times daily. His depression has improved, but his leg pain persists. He has been unable to work because of persistent leg pain, and recently his wife left him.

Past history includes a lumbar laminectomy for back pain in 1969 and emergency cholecystectomy for acute gangrenous cholecystitis and cholelithiasis in August 1980.

Motor nerve conduction velocity studies have shown a symmetrical peripheral neuropathy involving both the upper and lower extremities. Lumbar myelogram and femoral arteriograms have been normal. In addition to the leg pain, he

has had erectile dysfunction, and studies with a nocturnal tumescence monitor have shown nocturnal tumescence decreased in quantity.

Physical examination revealed a well-nourished, plethoric, slightly overweight man with a blood pressure of 120/90 mm Hg. Optic fundi were normal. He was clinically euthyroid. The peripheral pulses were normal. The deep tendon reflexes were present but hypoactive, vibratory sensation was reduced at the toes and ankles, and there was hypesthesia to pinprick and touch in a stocking distribution below the lower calves bilaterally. There was no muscle atrophy or weakness.

Howard S. Kirshner, M.D. (assistant professor of neurology—Vanderbilt Medical Center): Diabetic neuropathy can be subdivided into four types. This patient has the symmetric type of distal neuropathy, with the typical symptoms of numbness, paresthesias, tingling, burning, and cramps in the muscles of the feet. The onset is insidious and the symptoms are frequently worse at night. It usually involves the most distal parts of the extremities, probably because the longest nerves in the body are involved, with nerve endings several feet from their cells of origin in the spinal cord.

Examination usually reveals symmetrical decrease in vibratory, position, pinprick, and temperature sensations distally, and depressed deep tendon reflexes, especially at the ankles, but weakness and motor involvement are less prominent than sensory loss. Autonomic neuropathy can occur, as in this patient. If this patient has severe loss of sensation for injuries, Charcot joints can be a late complication, and cutaneous neuropathic ulcers can occur. Electromyography and nerve conduction velocity show slowed nerve conduction more than changes of denervation. These changes are seen in demyelinating processes, and the pathology of this condition shows demyelination, which may be reversible. Later there is some axonal degeneration, which is not reversible.

Recent studies have shown correlations between poor diabetic control and slowing of nerve

The Diabetes Clinical Care Conference at St. Thomas Hospital, Nashville, Tenn., a collaborative educational program of the St. Thomas Department of Hospital Education and the Vanderbilt Diabetes Research and Training Center, is coordinated by Joy Woodard, R.N. and edited by Alan L. Graber, M.D.

conduction velocities.¹ Improvement in motor nerve conduction velocity (but not to normal) has been associated with improvement in metabolic control, but sensory nerve conduction velocity does not improve. The etiology of this form of neuropathy is probably metabolic, and the differential diagnosis includes many other metabolic types of neuropathy, including uremia, drugs, toxins, vitamin deficiencies, alcohol, and hepatic disease, to name a few.

The second type of diabetic neuropathy is called mononeuropathy, or mononeuropathy multiplex, depending on whether one or multiple nerve trunks are involved. The onset is usually sudden and painful, and the prognosis for improvement is fairly good over a period of several weeks or months. Local nerve injury or nerve compression is common. Peripheral nerves affected include the femoral, sciatic, median, ulnar, radial, and almost any other peripheral nerve, with the femoral nerve being the most common. When the condition affects the cranial nerves, involvement of the oculomotor nerve is most common (sparing the pupil), but involvement of each cranial nerve except the twelfth has been reported. The prognosis for recovery is usually good. Pathologic findings show axonal degeneration; vascular etiology involving occlusion of the small arteries (vasa nervorum) is most likely. The relationship to metabolic control of diabetes is not as well correlated as with the symmetric distal polyneuropathy. The differential diagnosis of this type neuropathy includes those diseases which affect the vascular supply of small nerves, such as polyarteritis.

A third type of diabetic neuropathy is autonomic (visceral) neuropathy. The onset is usually insidious, and symptoms include orthostatic hypotension, disorders of sweating, abnormalities of voiding, nocturnal diarrhea and/or constipation, erectile dysfunction, and pupillary dysfunction similar to the Argyll Robertson pupil. Some of these syndromes have been discussed in previous conferences of this group.^{2,3}

Diabetic amyotrophy, the fourth type, is a controversial entity. The onset can be either acute or insidious. If it occurs abruptly, it is probably due to a mononeuropathy. Though the symptoms may be bilateral, usually there is asymmetric pain, weakness, and wasting in the lower extremities. Sometimes pain may involve the abdomen, or sensation on the extremities may be intact, with involvement of the motor system predominating. Electromyographic studies may

suggest either neuropathy or myopathy. The prognosis is uncertain, but most cases improve with better diabetic control.⁴

When nerve conduction studies are used, it is important to remember that the velocity of nerve conduction is affected only if demyelination occurs. Sometimes involvement of the small, unmyelinated fibers can cause pain, and their involvement does not show up as much on clinical examination or on electromyography as that of the large myelinated fibers. If there is axonal degeneration, changes of denervation will be seen on electromyography, including irritability and other electrical changes.

Barbara Adair, R.N. (nursing coordinator—Vanderbilt Diabetes Research and Training Center): Do the symptoms bother you at night?

Patient: Yes, especially when the sheets touch my feet. I seldom sleep more than an hour and often walk the floor at night.

Mrs. Adair: How about driving your car?

Patient: My feet feel numb and I can't tell how much pressure I'm using to push on the pedals.

Dr. Kirshner: Do your legs cramp?

Patient: The toes cramp.

Ira Turkat, Ph.D. (psychologist—Vanderbilt Diabetes Research and Training Center): When your wife, your means of support, left you, did the pain change?

Patient: No, it was already very severe. I am trying to get support from Vocational Rehabilitation; however, I have difficulty concentrating or thinking because the pain gets so bad.

Mrs. Adair: What do you do when the pain is bad?

Patient: Sometimes I grab my feet, or cry. I had had severe pain before with back trouble and with my gallbladder attack, but nothing as severe or persistent which lasted 24 hours a day like this.

Dr. Kirshner: The incidence of diabetic neuropathy is hard to estimate, since there is such a variability in reporting symptoms. It is estimated that at least 50% of diabetic individuals have symptoms at some point, but only 10% to 20% will have objective findings on clinical examination.

REFERENCES

1. Porte D Jr, Grof RJ, Holter JB, et al: Diabetic neuropathy and plasma glucose control. *Am J Med* 70:195-200, 1981.
2. Diabetes Clinical Care Conference. Sexual dysfunction in diabetic men. *J Tenn Med Assoc* 72:607-608, 1979.
3. Diabetes Clinical Care Conference. Diabetic diarrhea. *J Tenn Med Assoc* 73:118-119, 1980.
4. Chokroverty S, Reyes MG, Rubino FA, et al: The syndrome of diabetic amyotrophy. *Ann Neurol* 2:181-194, 1977.

Medical Laboratory Improvement in Tennessee

DANIEL L. KIMBELL and SARAH H. SELL, M.D.

Tennessee was among the first states to enact a Medical Laboratory Act (TCA 53-4101 through 53-4132, Public Acts of 1967). It gave authority to the Tennessee Department of Public Health (TDPH) to set uniform standards for hospital and independent medical laboratories, to regulate medical laboratory schools and blood banks, including plasmapheresis centers, and to license facilities and personnel. Since no funds were appropriated at first, the initial efforts involved existing TDPH staff, directed by Dr. Howard Barrick and three advisory committees of volunteers: Technical (chaired by Dr. John Duckworth), Education (headed by Dr. George Mayfield) and Blood Banking (chaired by Dr. James Phythyon). These groups assisted the staff in preparation of the initial regulations which incorporated, but were not limited to, the Medicare requirements. Volunteers, also, inspected laboratory schools. In 1970, funds were available to establish the Office of Laboratory Licensing Service to oversee the programs, evaluate profi-

ciency testing, and perform on-site inspections.

Since the objective of the law and the ensuing efforts have been to upgrade the laboratory service to the medical profession and the people of Tennessee, it is interesting to look at the progress during the dynamic decade of the '70s.

Laboratory schools were addressed as a first priority under the new law. In 1967, there were several proprietary institutions whose facilities and faculties were inadequate for the required training under the Laboratory Act. They promptly disappeared from the scene when the pressure developed for conforming with the required curriculum. In 1980, there were 28 approved schools for laboratory technology in Tennessee.

The licensing of personnel was a major change required by the new law. With the full support of the professional societies, it was agreed that all categories of personnel, except directors (who were already licensed as physicians), should take an examination. There was no "grandfather-

TABLE 1
LABORATORY PROFICIENCY TESTING PROGRAM

	1970-1971			1979-1980		
	No. With Serious Deficiencies	No. Tested	%	No. With Serious Deficiencies	No. Tested	%
Chemistry						
Basic Survey	30	127	24	8	129	6
Comprehensive	8	38	24	2	42	5
Hematology						
Basic Survey	31	127	24	8	129	6
Comprehensive	9	32	28	2	42	5
Blood Bank						
Basic Survey	22	122	18	5	118	4
Comprehensive	6	30	20	2	42	5
Bacteriology						
Basic Survey	35	98	36	4	88	5
Comprehensive	9	32	28	0	38	0

From the Tennessee Department of Public Health, Nashville. Mr. Kimbell is director of the Laboratory Licensing Service and Dr. Sell is medical consultant to the TDPH.

(Continued on page 599)

Radiology Case of the Month

RANDALL L. SCOTT, M.D.

A 27-year-old man presented with a swollen, painful right wrist following a fall onto his outstretched hands. Physical examination demonstrated diminished range of motion of the right wrist. Radiographs of the involved wrist were obtained (Fig. 1). What is your diagnosis?

- (1) Lunate dislocation
- (2) Navicular dislocation
- (3) Perilunate dislocation
- (4) Triquetrial fracture-dislocation



Figure 1. AP and lateral view of the right wrist.

From the Department of Radiology, University of Tennessee Center for the Health Sciences, 865 Jefferson Ave., Memphis, TN 38163.

Radiographic Findings

The AP view of the right wrist demonstrates overlapping of the medial edge of the navicular and the lateral edge of the lunate. The lunate has assumed a triangular configuration rather than its typical quadrangular shape. These findings suggest a lunate dislocation. A lateral view of the wrist confirms this diagnosis. In the normal wrist the convex proximal surface of the lunate rests in the concave distal surface of the radius. In this case, however, there is palmar displacement of the lunate with asymmetry of the radiolunate articulation.

Navicular fracture is the most common significant injury of the carpal bones, accounting for 60% to 70% of all diagnosed carpal injuries.¹ Dislocation of the navicular is well described, both as an isolated entity and in conjunction with fracture and dislocation of other carpal bones, but is not as common as lunate or perilunate dislocations.^{2 p401} In the present case, the navicular is in normal position and is not broken.

Although almost every carpal bone has been described as being individually dislocated, the

great majority of fracture-dislocations of the carpus are of the perilunate type. AP radiographs of the wrist in such a case demonstrate swelling and foreshortening of the wrist and an increase in the overlap pattern of the carpal bones. The lateral radiograph is diagnostic, demonstrating the capitate, which normally sits within the distal concavity of the lunate, to be absent from the lunate cup. The lunate itself often is still aligned with the radius, so that the hand and wrist appear to be displaced dorsally and proximally to the lunate and distal radius. In some cases the lunate is palmarly displaced, and rarely it assumes a dorsal position.^{2 p401} In this case the hand and wrist are aligned properly relative to the longitudinal axis of the radius, so that perilunate dislocation is not a likely diagnosis.

The triquetrum may be fractured transversely during a perilunate dislocation, but is rarely dislocated because of the strong periosseous ligamentous support. The most common triquetral fracture occurs along the dorsal surface secondary to ulnar deviation and hyperextension.^{2 p422} Radiographically, there will be dorsal



Figure 2. Same patient after reduction of lunate dislocation. Notice the lunate is not palmarly displaced, as in Figure 1. The proximal convex surface of the lunate fits nicely into the distal radial cup. The bony density of the lunate is increased relative to the remainder of the osteoporotic carpal bones.

soft tissue swelling over the wrist and a fragment of avulsed bone overlying the triquetrium. The absence of these findings excludes triquetrial injury in this case.

Discussion

Traumatic entities involving the carpal bones, in order of decreasing relative frequencies, include navicular fracture, dorsal avulsion injuries, posttraumatic carpal instability with or without dislocation, lunate fracture, and all other carpal fractures.^{2p385} The most constant and dependable sign of carpal injury is focal tenderness. Other clinical findings, depending upon the extent of carpal disruption, vary from extensive, severe swelling with changes of shape and contour to minimal perceptible abnormality.^{2p386}

The radiographic evaluation of the wrist for fracture or dislocation consists of AP, lateral, and both oblique views in neutral position. Flexion or extension views may be helpful in select cases. The different overlap of the carpal bones in the various positions is such that most fractures can readily be seen in at least one of these views.^{2p387}

Lunate dislocation is often due to carpal instability as a result of direct trauma, but is less common than perilunate dislocation. The chronic arthritides, such as rheumatoid arthritis, can create an unstable carpus and predispose to lunate

dislocation as well.^{2p400} Generally, a lunate dislocation leaves the palmar radiolunate ligament intact. If the lunate is totally dislocated from its associated soft tissues, avascular necrosis will occur.^{2p401} This will be recognized as a relatively dense lunate in the midst of severely demineralized carpal bones (Fig. 2). The total interruption of the blood supply prevents hyperemia which would ordinarily cause post-traumatic osteoporosis.

Treatment for fracture-dislocation of the wrist is beginning to lean toward open reduction and internal fixation, particularly with the more complicated combination-type injuries. A simple lunate dislocation is often treated by the closed method with traction and supportive measures.^{2p402} Early detection of grossly deformed wrists is critical, since closed reduction after three weeks is not usually practical. In such cases open reduction is required, and excision of the involved carpal bones may be necessary.³

DIAGNOSIS: (1) Lunate dislocation. 

REFERENCES

1. Conwell HE, Reynolds FC: *Key and Conwell's Management of Fractures, Dislocation, and Sprains*, ed 7. St. Louis, CV Mosby Co, 1961.
2. Rockwood CA Jr, Green DP: *Fractures*. Philadelphia, JB Lippincott and Co, 1975.
3. Campbell RD Jr, Lanse EM, Yeoh CB: Lunate and perilunate dislocations. *J Bone Joint Surg* 46B:55-72, 1964.

Public Health Report ...

(Continued from page 596)

ing." Workshops, great and small, broke out all across the state to update and refresh those eligible for the upcoming examinations. A new advisory committee was appointed to oversee the selection of questions for various levels of examinations and to select the pass/fail grades. Dr. Willard Faulkner chaired this conscientious group of volunteers selected from leaders who were actively involved in laboratory duties. After a period of time which was allowed to phase in the requirements, the initial survey of 198 medical laboratories in 1971 detected unlicensed personnel in 24 facilities. In 1979, there were only five utilizing such persons (these were all in process of application for licensing).

On-site inspections were organized by dividing the state into three major sections: East, Middle, and West. The inspectors throughout the decade were selected from qualified technolo-

gists with experience in hospital laboratories. The attitude of the TDPH has been to use "friendly persuasion" to give advice, if needed, for correction of deficiencies which appeared during an inspection. The objective has been to assure quality service to the people of Tennessee, not to close laboratories except as a last resort. However, the pressure has been so great in several instances that laboratories closed voluntarily rather than conform to the requirements.

The first statewide proficiency testing program (Table 1) in 1970-1971 indicated serious deficiencies in the results from about one fourth of the laboratories in chemistry, hematology and bacteriology. Blood banking was only slightly better. By 1979-1980, however, only 5% to 6% of laboratories were found to have serious deficiencies in any category. The greatest progress occurred in accuracy of bacteriology reporting. 

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ALLEN S. EDMONSON

Change Healthstyle?

The Tennessee Medical Association has agreed to cosponsor an effort in adult health education called "Healthstyle." We have joined the Tennessee Department of Public Health in a campaign to influence adults in our state to, *first*, evaluate their own lifestyle as it relates to health and preventive medicine and, *second*, make necessary alterations in that lifestyle to preserve their health. Adults can and frequently do change their health habits in regard to obesity, stress, smoking, alcohol, and exercise.

We urge you to join personally and help in your office and your community. Radio, television and press promotions are already in progress. Industries, insurance companies, civic organizations and other groups are working with health professionals.

Personal "Healthstyle" questionnaires and educational materials are available for distribution by physicians who wish to participate. All TMA members will be sent further information from the Association.

With your help we'll find that you can "teach an old dog" if you hit him hard enough with the facts!

Allen S. Edmonson M.D.

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AUGUST, 1981

editorials

AMA—The New Look

It is not easy to get two people to agree on anything, and when you get together a group of doctors, who as a group are mostly self-assured, innovative people, you are likely to have about as many different ideas about how almost anything should be done as there are doctors involved. Since they are generally not bashful about defending their position, you can heat up a discussion on almost any topic with a minimum of effort. It is therefore not surprising that the AMA House of Delegates is, to say the very least, an interesting place. It is the world's most democratic body, and I have always been impressed, and at times amazed, by the general good humor with which the delegates tolerate sometimes long-winded discourses on positions which offend them; it is to the delegates' credit that even though floor fights are not always con-

ducted by the Marquis of Queensbury rules, once off the floor the delegates again become one big happy family—or at least they are not disaffected for long. There is simply too much work to be done to get hung up on any one pet project.

It should not be unexpected, then, that when a task force of staff set about some months ago to rethink the AMA—what it should be like and what it should do for its constituents in these parlous times—its course was through rocky shoals mined with all sorts of special interests. The remarkable thing is that it could come up with a report the Board of Trustees could recommend to the House, and that the House, after a good deal of haggling, most of it mercifully in the reference committee, and after some generally minor and occasionally major modifications, was able to buy most of it.

The problems faced by staff, the Board, and the House were vast. The crisis the organization faces at the moment is membership, and not finances. The AMA had to come up with a program, then, which would gain new members without losing old ones; it must adequately represent the doctors of this country both politically and scientifically, and still maintain its image as a scholarly, scientific organization; it must do all this in an economical and cost-effective way.

What came out was a compromise, of course—one which was less than anyone had wished for, but maybe better than most had thought possible. Like a new pair of shoes, the only way to find out if it will wear well will be to try it out for a while. By action of the House, the Council on Continuing Physician Education is no more. I have difficulty envisioning how the AMA will be able to maintain a satisfactory position in education, so necessary to its consideration as a scholarly organization, when it will no longer produce any live teaching programs. But the Board allows as how it has some things in mind which will accomplish this, so we can only wait and see.

It is certainly unquestionable that representation, whether or not you believe it to be AMA's primary role, is an important and necessary one, and it is probably true, as the task force report maintains, that this is what the majority of doctors look to AMA to do for them. It may be that this is where members and potential members feel their dues dollars will be best spent, and perhaps an increased membership will accrue from it. I am something less than optimistic that all our blind colleagues will suddenly receive

their sight and flock to the banner, but I guess it is worth a try. I think it would be short-sighted, though, to risk the AMA's credibility as a scholarly organization simply as an economy measure.

It was repeatedly stated in the reference committee that there are some things you do for your members that cannot be, and therefore should not be projected to be, cost effective. This was said in reference to live continuing education and to the journals. The report said the journals should become cost effective, as well. I know enough about journal publishing to doubt the possibility of that happening, given the current cost of printing and mailing, and as I am sure the health of the AMA depends to no small degree on the health of *JAMA*, I would hope *JAMA*'s life is not tied to its profitability.

There is one thing I have learned for a fact in my dealings with the AMA House of Delegates. If it does not like something, it can change it, and it will. It was the will of the House to try out the new look proposed by the Board. But nothing in the AMA is graven in stone, and any new look soon becomes an old look—and the more things change, the more they are the same.

So we shall see what we shall see. The one thing that remains clear in all this is that the AMA needs you, but not nearly so much as you need the AMA—a healthy and vigorous AMA.

J.B.T.

Paradise Revisited

Here am I, your special island.
Come to me, come to me.

Oscar Hammerstein, III—*Bali H'ai*

James Cook, though he had little formal schooling, in the words of a tribute to him found in the account of his third and fatal voyage to the Pacific Ocean, "raised himself solely by his merit, from a very obscure birth, to the rank of Post Captain in the royal navy." From 1768, when he sailed on his first voyage of discovery in the Pacific Ocean to his untimely death on the Island of Hawaii in February, 1779, he was home less than two years—only long enough to refit for subsequent Pacific explorations. So accurate were the charts of this greatest navigator of all that, among other things, the myth of the Northwest Passage from the Atlantic to the Pacific oceans was forever laid to rest. So great were his scientific contributions that although his last voyage took place during the American Revolu-

tion, Benjamin Franklin implored the captains of American vessels not to hinder Cook in any way, and they did not.

Cook and his men fell in love with Tahiti, which Wallis discovered a few years earlier. He first went there in 1768, and returned on each subsequent voyage. They also fell in love with some islands to the north that Cook discovered on his third voyage and named for the Earl of Sandwich. A hundred years later Mark Twain was also captivated by the Sandwich Islands, the only place he ever found that he said never palled. Still later by about another hundred years, and only a few months more than 200 years after Cook's murder by Hawaiian natives on his return there, I was snorkeling off the site of that untimely and tragic event in Kealahou Bay, Hawaii, where the song says the little grass shack with its fish and poi wait for the homesick island boy. In company with him, Captain Cook and his men, and Mark Twain, I wanted to go back. Like them, I did.

Of all the islands, Mark Twain's favorite was Kauai. He called it the "Garden Isle." It is my favorite, too. In four trips (three to Hawaii and one to the Society Islands) I have seen them all, and it is the only island I put ahead of Moorea and Bora Bora. In the public mind, those two groups of islands are typified by Tahiti on the one hand, and Honolulu, with its Waikiki Beach, on the other, which is one reason those are not the places to go. (On the older charts, Tahiti appears as Otahiti. This is because Wallis misunderstood the inhabitants, who when asked the name of their island, replied "Otahiti," which means, "It is Tahiti.")

Ever since my first visit to Kauai about a year and a half ago, the perfume of the *Plumeria frangiapani* has been in my nostrils, and dancing before my eyes when I close them is the glitter of the early sun on the tie-dyed blue water viewed from the heights of the Kalalau trail along the Na Pali Coast. Was it real? Is the water really so blue? And the green Kalalau Valley which spread before me from the pinnacles which crown it like a tiara—does it exist as it is etched on my memory? Or is it really only like the comparatively dreary (though still gorgeous) photographs I have of it? Does the indescribable, undepictable magnificence and beauty that I remember really exist, or do time and my memory play me false? These questions kept running through my mind as I approached "my special island" for the second time.

It's a long way from Nashville to Kauai. Door to door, the trip takes a minimum of 15 hours or so, considering a couple of airplane changes. But you need a "second look" to see if you were right the first time, and whether a third look, or even more, are worth the effort. If you think it takes a long time in the jet age, though, consider it as nothing compared to the three years it took Cook to make his Pacific rounds. The wife of one of my classmates in the course I took at the Mauna Kea Beach Hotel on Hawaii, the reason for our being in the islands in the first place, complained of being jammed like cattle into a 747. Well, again consider Cook, whose crew were crowded for years into a small sloop. His scientist of the first voyage did not sign on for the second because of the incommensurable officers' quarters. It is to a considerable extent a tribute to Cook that most of his officers and men were repeaters, many for all three voyages, but overriding all was that persistent tug, the insistent call of the islands.

While I waited for the helicopter which would take me to the remote, relatively — sometimes otherwise wholly — inaccessible parts of Kauai, I fell into a conversation with an employee of *Papillons Kauai Helicopters* who grew up in Youngstown, Ohio, went to Ohio State, and married and went to work in Detroit for General Motors, where he stayed for seven years. Growing up in a steel-mill town, he thought the sun was green or at best orange, and the moon purple. The greatest revelation of his life, he said, came when he and his wife watched the moon come up huge and white over Nawiliwili Bay, off Lihue, county seat of Kauai. They returned to Detroit only to get their things together. In the two years they have lived in Lihue they have not left Kauai, as there is a lifetime of exploring to do on just that one little island, he said. I believe him.

I was gratified to find the one-lane U-turn bridge over the Hanalei River still insulates the north shore from the advance of civilization (so called), and that in at least that one place "the islands" still survive. On my first visit it was dry autumn, with its clear sunny skies. This time there were clouds and rain — but only sometimes. Whereas the flowers following the unusually dry summer were then relatively scarce, this time I was surrounded by a profusion of blossoms of plumeria, oleander, bougainvillea, poinciana, mamane, cassia (the golden shower) and so on, the likes of which I never saw anywhere else,

and which beggars description. The subtle heady perfume of that first visit now hung heavy in the air, perfuming the haze and mist and pressing resolutely on the senses. Spots of sunlight dappled shaded Kalalau, and its crown was often tufted and sometimes enshrouded with ermine. Nowhere except on the forever arid southwest coast was there ever pure sun and bright, cloudless skies, but then again, never, except on that wettest spot on earth, Waialeale's flooded summit, did unbroken clouds or steady rain cast a pall.

The helicopter showed me an island I could believe exists only in dreams. Kalalau, which I thought beyond compare, was dimmed by green gashes scalloped with sheer "hanging valleys" and fluted spires. Pure white hidden beaches were washed with snow-capped sparkling sapphire. Broad emerald valleys streaked with dancing waterfalls squeezed down into narrow red canyons mottled with green and yellow. There was Waialeale's immense caldera, a green, open-sided, wet pit a thousand feet deep with tears streaming down its face, and next to it bright green Olokele canyon. At the island's core lies the true crater, now become soggy Alakai Swamp, at 4,000 feet the world's highest, crisscrossed by miles of foot trails for the hardy and bold. As the volcano died, its crater filled with pahoehoe lava, much harder than the lava of its walls, so that while everything else is being slowly eroded away, the core, like Devil's Tower in Wyoming, but much younger and not yet stripped naked, survives intact, tipped with a spongy morass wrapped in dense jungle and populated by mosquitoes that one hiker claimed are big enough to carry you off. It is gorgeous from the air, and even from below it is inviting as you look out over its edge from the ridge that separates it from the head of Kalalau Valley. You can penetrate its dark mysteries from the Koke'e State Park Lodge, situated a mile or so away along the swamp's perimeter.

If Na Pali is magnificent seen from the trail, or from the beach at either end, the view as you hang suspended over it is indescribable. Every point of its sawtooth coast is a new wonder, each with its neighbor embracing a fractured marvel opening onto a bright beach. And midway up its sheer face winds a tiny, dim thread — the Kalalau Trail. How anyone could cling to this faint dent seems a wonder; it is only after having walked along part of it that you realize it is simply dwarfed by the immensity of its surroundings.

Elsewhere, as you look down from your hanging perch, Na Pali shows you a row of bright red toes with green nails wading in a turquoise puddle, and tickled by wispy white feathers of foam blown in the breeze. The reds on this oldest of the islands are startling. You find them dotting the Na Pali like rubies and making an artist's palette of the walls of Waimea Canyon. The Russian Fort, now Fort Elizabeth, which stands a mute reminder of a brief Russian presence in 1815 at the mouth of the Waimea (translated "red water") River, is built of boulders near the color of blood on dirt of like hue.

Slowly, slowly, as its younger sister Hawaii, the Big Island, continues building with its two active volcanoes, Mauna Loa and Kilauea, this old island is turning to dirt and being washed by Waialeale's torrents into the sea. The last vestige will be its 4,000 foot swamp-crested spine.

So, what of my second look? First, it revealed a surface of beauty and adventure yet unscratched. The overview of the Na Pali Coast from the air, which included a brief descent onto one of its hidden beaches, demands a closer look by boat, and a visit to other even more beautiful beaches and valleys. The hike along Kalalau's limiting ridge requires that the trail's branches be followed into Alakai Swamp, at least for a little way. The silver thread of the Waimea River beckons the watcher to leave its mighty canyon's rim and try its waters. Countless dark crystal pools fed by waterfalls seduce the swimmer, and behind the fields of sugar cane rise the magnificent southern chain, the Hoary Head Mountains, which I have not yet touched. Kalalau calls, and the Na Pali Coast's Kalalau trail winds on for nine miles past the two I have traveled, not to mention side trails to valleys and new hidden beaches.

There are no snakes in the islands, and no wild beasts. No predators at all, save man alone. The two main industries of the islands are tourism and marijuana. Pot thrives in the cane fields and the lush valleys. In every parking lot are signs, "Take your belongings with you. Do not lock them in your trunk." On maps of Kauai is a caveat, "Hiking in Kalalau Valley unsafe due to dangerous conditions." Those "conditions" are bands of spaced-out squatters who live in the caves dotting the cliff face, and who make war on each other and the world. The cost of living is increasing in the islands at a rate 20% to 30% faster than the national average, and real estate prices are out of sight.

Just as Thoreau marched to the beat of a different drummer, so not everyone hears the call of the islands. But to those who do, it is compelling, irresistible, demanding to be heeded.

Captain Cook went to Paradise. With most of his men, in the face of incredible hardship, he returned twice. So great were his personal magnetism and leadership, his discipline, and his wisdom that in the days when scurvy and other diseases were decimating crews, and when fewer than a third of some expeditions returned, he lost only one man. He was, the tribute said of him, "a father to his men." Those men returned from the third voyage in mourning. For in Paradise there were savages, and those savages had taken the life of James Cook, Captain, R.N.

There is an old French maxim that says the more things change, the more things are the same. There is still Paradise, and there are still savages in it. (But then, they are around us everywhere.) So, would I go back for a third look? And a fourth? You bet!

Maybe tomorrow?

J.B.T.

Again — And Again — And ...

A scream, a flash.
A twitch — nothing more.
A body that only a moment before
Held vibrant life.

The shadows screamed, "Whore!
"I have ripped you once more!
"God's judgement upon you!
"And I will kill more!"

"Not bad, just mad," the doctors said.
"We have made him well," they said —
"Made him be as sane as we —
"Wait and see."

A scream, a flash.
A twitch — nothing more.
A body that only a moment before
Held vibrant life.

The shadows screamed, "Whore!
"I have ripped you once more!
"God's judgement upon you!
"I will kill even more!"

"Not bad, just mad," the doctors said.
"We can make him well," they said —
"Make him be as sane as we . . .

J.B.T.



Harold B. Boyd, age 77. Died May 29, 1981. Graduate of Loma Linda University College of Medicine. Member of Memphis-Shelby County Medical Society.

Nirmal K. Pal, age 44. Died June 7, 1981. Graduate of R. G. Kar Medical College of Calcutta University, West Bengal, India. Member of Warren County Medical Society.

new members

The JOURNAL takes this opportunity to welcome these new members to the Tennessee Medical Association.

BLOUNT COUNTY MEDICAL SOCIETY

Melinda Ann Lucas, M.D., Rochester, NY

CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY

Robert McAlister Barnett, III, M.D., Chattanooga

Sushila N. Tejani, M.D., Chattanooga

Phil Joe White, M.D., Chattanooga

CONSOLIDATED MEDICAL ASSEMBLY OF WEST TENNESSEE

Clarey R. Dowling, M.D., Brownsville

KNOXVILLE ACADEMY OF MEDICINE

Joseph M. Mansy, M.D., Knoxville

LAKEWAY MEDICAL SOCIETY

Nicolai Chalfa, M.D., Morristown

MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

Consolacion V. Cancio, M.D., Memphis

Ronald Steven Roney, M.D., Memphis

James W. Simpson, M.D., Hickory Withe

Charles Mac Van Valkenburg, M.D., Memphis

NASHVILLE ACADEMY OF MEDICINE

Estrella P. Acosta, M.D., Madison

Luther B. Adair, M.D., Nashville

Dan E. Conner, M.D., Nashville

Stephen S. Entman, M.D., Nashville

Edward M. Priest, II, M.D., Nashville

Wen T. Shiao, M.D., Nashville

N. Eric Wooten, III, M.D., Nashville

SULLIVAN-JOHNSON COUNTY MEDICAL SOCIETY

Roger W. Catlin, M.D., Bristol

James L. Lapis, M.D., Bristol

Dennis G. Laug, M.D., Bristol

WASHINGTON-CARTER-UNICOI COUNTY MEDICAL ASSOCIATION

Jose M. Bejar, M.D., Mountain Home

Louis J. Boelen, M.D., Johnson City

Ann Groce, M.D., Johnson City

Steven M. Kimbrough, M.D., Johnson City

Michael A. Stein, M.D., Johnson City

personal news

Robert Broady, M.D., Sevierville, who has provided medical care to the Sevierville area for over 50 years, was honored by his alma mater, Maryville College, with an Alumni Citation for 1981.

Oscar B. Crofford, M.D., director of the Vanderbilt Diabetes Research and Training Center, has been named president of the American Diabetes Association.

Mary Brock Duffy, M.D., director of the Knox County Health Department, was honored by her alma mater, Allegheny College in Meadville, Pa., with the Alumni Congress Gold Citation, awarded in recognition of honor reflected on Allegheny by outstanding achievements of a recipient.

James H. Elliott, M.D., Nashville, has been elected to membership in the prestigious American Ophthalmological Society.

Thomas F. Frist, M.D., Nashville, vice chairman and chief medical officer of Hospital Corporation of America, received an honorary doctor of humanities degree from Southwestern University, Memphis.

Robert L. Harrington, M.D., Dyersburg, has been appointed to serve on the Committee on Obstetrics: Maternal and Fetal Medicine of the American College of Obstetricians and Gynecologists.

R. S. Martin, Jr., M.D., has been elected chief of staff at Carter County Memorial Hospital in Elizabethton. Other medical staff officers elected include

R. E. Galloway, M.D., vice chief of staff; and Ted Taylor, M.D., secretary.

Joe D. Mobley, M.D., has been elected chief of staff of Henry County General Hospital in Paris for 1981-1982. Other medical staff officers elected were John E. Neumann, M.D., vice chief of staff; and Terry O. Harrison, M.D., secretary.

national news

From the AMA's Office in Washington, D.C.

Budget Cuts Slash Health Spending

The Reagan administration has won hands-down its five month budget campaign in the Congress. Some mop-up operations with an occasional skirmish here and there is all that remains in carrying out the President's promise to reduce federal spending.

The budget reconciliation triumph in the Democratically controlled House of a bill backed by the administration nailed down a successful outcome in Congress for the President's economy program to reduce federal expenditures next fiscal year by more than \$38 billion. The 217-211 vote also made clear that the House is controlled effectively on major issues by a coalition of Republicans and conservative Democrats. The major impact on health will be a \$1-billion slash in federal Medicaid outlays and a \$1-billion cut in spending in 26 categorical grant health programs.

The only setback in the House was the decision not to press for a vote on a Republican substitute plan for the budget package approved by the Democrats on the House Commerce Committee. Although the Democratic plan met the health budget targets set by the administration, it took a different road and did not remove some of the programs the administration wants to phase out such as professional standards review organizations (PSROs) and health planning.

The substitute plan prepared by Rep. James Broyhill (R-N.C.), ranking Republican on the Commerce Committee, would have ended these programs and hewed strictly to the administration's original block grant and Medicaid proposals.

The health budget measures weren't included in the overall successful budget proposal authored by Reps. Phil Gramm (D-Tex.) and Delbert Latta (R-Ohio) because the Republicans on the Commerce Committee had been assured earlier by the Democratic leadership that they would have an opportunity on the House floor to seek a vote on their plan, since the Commerce Committee had deadlocked 21-21 on the Democratic plan.

With 29 Democrats breaking ranks, the Gramm-Latta measure prevailed by a six-vote margin over the budget bill prepared by the House committees with the exception of the set-aside Commerce Committee bill.

Broyhill decided apparently that there was danger of losing a handful of votes (only a switch of four votes would be fatal) and announced that he was withdrawing his substitute. He told the House that

TMA Members Receive AMA Physician's Recognition Award

Thirty-one TMA members qualified for the AMA Physician's Recognition Award during May, 1981.

To qualify for the PRA, a minimum of 140 hours of continuing medical education must be earned over a three-year period; 60 of these hours must be Category 1.

This list does not include members who reside in other states. Names of additional PRA recipients will be published as they are received from AMA.

William E. Armour, M.D., Memphis
Richard B. Austin, M.D., Clarksville
Joseph E. Baker, M.D., Memphis
Roy J. Barnes, M.D., Memphis
Patricia Bihl-Miranda, M.D., Old Hickory
Michael I. Bonder, M.D., Chattanooga
Robert Buchalter, M.D., Memphis
Alex G. Carabia, M.D., Oak Ridge
Samuel H. Dillard, M.D., Nashville
John H. Gilliam, M.D., Knoxville
Philip Goldhammer, M.D., Memphis
Nicholas Gotten, M.D., Memphis
Kenneth O. Jobson, M.D., Knoxville
Gerald I. Jones, M.D., Hixson
James W. Leach, M.D., Columbia
Ben R. Mayes, M.D., Nashville
James F. Mayhew, M.D., Memphis
Jack H. McCubbin, M.D., Memphis
Norman A. McKinnon, M.D., Maryville
Sam P. Patterson, M.D., Memphis
Keith D. Peterson, M.D., Clarksville
Alan B. Platkin, M.D., Memphis
Carolyn C. Price, M.D., Memphis
Norman S. Propper, M.D., Kingsport
Daniel R. Ramey, M.D., Memphis
Jack C. Sanford, M.D., Memphis
James W. Sherrell, M.D., Chattanooga
Glen C. Shults, M.D., Newport
Clyde G. Smith, M.D., Memphis
John M. Tanner, M.D., Nashville
Forrest G. Tompkins, M.D., Knoxville

Commerce Committee Chairman John Dingell (D-Mich.) promised that "he wants to work with us to resolve whatever differences that we have between our versions as we go into conferences."

When Does Life Begin?

The Senate has concluded hearings on the emotion-laden issue of when human life begins.

The American Medical Association opposed the legislation that declares human life shall be deemed to exist from conception.

"The practical effects of the proposed legislation are staggering," said Joseph Boyle, M.D., AMA Board Chairman. Dr. Boyle told the Senate Judiciary Subcommittee that "passage of this bill would have an adverse impact on critical physician-patient relationships and would create endless medical, ethical and legal difficulties for the people of this nation."

Physicians could face serious dilemmas in advising pregnant patients, Dr. Boyle said. Under the bill, he noted, the physician would be responsible for the welfare of every fetus whose legal and health interest would, in the eyes of the law, be equal to, but may be in conflict with, those of the woman.

Dr. Boyle listed some of the life-endangering conditions of pregnancy that physicians are presented with, and said the bill does not address these physician dilemmas or provide answers to physicians who must deal on a daily basis with these critical situations.

Effective medical intervention in these life-threatening situations would be prohibited under the measure, he said.

The issues raised by the bill go far beyond the realm of medical science and into social, religious, philosophical, ethical and moral concerns, the witness said. "The issue is unsolvable solely from a medical and scientific view."

"In sum," concluded Dr. Boyle, "we see no end to the negative medical, legal, social, ethical, and moral repercussions of a national policy that declares that human life begins at the time of conception."

The bill in effect would allow the states to prohibit abortion for any reason. Antiabortion advocates also have been pushing a constitutional amendment that would achieve the same purpose. The outlook for either approach getting through Congress this year appears dim. To date, the lawmakers have concentrated their efforts on limiting the use of Medicaid funds for abortions.

Medicaid Provisions Debated

Restricting freedom of choice for Medicaid beneficiaries would have a "devastating result" on the

poor, the AMA has told Congress.

"A system under which Medicaid recipients have their freedom of choice restricted would result in an officially sanctioned dual system of health care: one level of service for the poor, and a superior level of choice and options for everyone else," said Frederick Ackerman, M.D., chairman of the AMA Council on Legislation.

The proposal was made by the Reagan administration to accompany the 5% "cap" on federal Medicaid expenditures next fiscal year.

The plight of the poor "would be even further aggravated" by another administration proposal to eliminate current reimbursement requirements in the Medicaid law, Dr. Ackerman said. If Medicaid beneficiaries should remain eligible for quality care, "then it is important for all providers to receive reasonable reimbursement," Dr. Ackerman said.

High Court To Rule On Advertising

The question of whether the federal government has the right to forbid professional associations such as the AMA from enforcing ethical restrictions against advertising will be decided by the Supreme Court.

In a brief order, the Court agreed to hear the AMA's appeal from the 1979 FTC ruling that barred the AMA from involving itself in physician advertising unless the advertising would be "false or deceptive" as defined by the FTC. After an Appeals Court by a 2-1 vote upheld the FTC last October, the AMA went to the Supreme Court, declaring the case is of "enormous importance" because it allows the government to "prevent professionals who have voluntarily associated together from taking a position against promotional practices which they believe to be deceptive."

As is customary, the high court gave no explanation for accepting the case for review. A hearing will be held this fall, following the summer recess. A decision won't be issued until later, probably next year.

The AMA said that if the FTC is upheld "the real loser will be the public, often the poor or unsophisticated, who are drawn to incompetent practitioners by the meaningless testimonials, inflated promises, non-verifiable claims of superiority and outright lies that the AMA's 1976 statement (on advertising and solicitation) had condemned."

The Supreme Court was asked to hear the case "before responsible medical societies . . . simply abdicate the field to a government agency (FTC, which itself acknowledges that it is incapable of drafting precise guidelines)."

Joining the AMA in the appeal were the Connecticut State Medical Society and the New Haven County Medical Association, both of which were

named in the FTC's original 1975 complaint. The American Dental Association supported the AMA position and has agreed to abide by rules similar to those set out for the AMA.

Congress Moves To Clip FTC's Wings

The Federal Trade Commission has been challenged from another quarter. Legislation has been introduced in Congress to impose a moratorium on the FTC's moves against state-regulated professions, including the medical profession.

Rep. Thomas Luken (D-Ohio) has told the House that "one of the most questionable and controversial areas of expansion by the FTC in recent years has been its involvement in activities of state-regulated professions." He continued: "Even though it has never been given express authority by Congress to do so, it has increasingly sought to usurp state responsibility, override state laws, and preempt state regulation of state-regulated professions."

Luken said his bill would impose a moratorium on FTC action in the area until Congress determines what appropriate role, if any, the Commission should have with respect to state-regulated professions.

announcements

CALENDAR OF MEETINGS

NATIONAL

Sept. 12-15	American College of Radiology, Caesar's Palace, Las Vegas
Sept. 14-15	American College of Nutrition, Marriott Hotel, Bethesda, Md.
Sept. 14-16	American Neurological Association — Hyatt Regency, San Francisco
Sept. 14-17	American College of Emergency Physicians — Marriott Hotel, New Orleans
Sept. 16-19	American Thyroid Association — Sheraton Ritz, Minneapolis
Sept. 17-19	American Paraplegia Society Symposium on Spinal Cord Injury Medicine — Sheraton St. Louis Inn, St. Louis
Sept. 18-19	AMA Medical Staff Leadership Seminar — The Drake, Chicago

Sept. 20-24	American Academy of Otolaryngology — Head and Neck Surgery — New Orleans
Sept. 21-24	American Academy of Family Physicians — Hilton Hotel, Las Vegas
Sept. 23-25	Clinical Orthopaedic Society — Kahler Hotel, Rochester, Minn.
Oct. 1-4	American Society of Internal Medicine — Grand Hotel, New York
Oct. 10-18	International Body Imaging Meeting — Hyatt Regency Hotel, Maui, Hawaii
Oct. 11-15	Medical Group Management Association — New Orleans Hilton, New Orleans
Oct. 11-16	American College of Surgeons — Fairmont, San Francisco
Oct. 11-16	American Physiological Society — Hilton Hotel, Cincinnati
Oct. 13-17	American Society of Therapeutic Radiologists — Hyatt and Crown Center, Kansas City, Mo.
Oct. 15-17	Child Neurology Society — Minneapolis
Oct. 15-18	American Academy of Psychiatry and the Law — Del Coronado, San Diego
Oct. 15-18	American Association for Hand Surgery — Sheraton Centre, New York
Oct. 15-18	American Society of Bariatric Physicians — Aladdin, Las Vegas
Oct. 17-21	American Society of Anesthesiologists — Hilton and Fairmont, New Orleans
Oct. 17-23	College of American Pathologists — Hilton Hotel, Las Vegas
Oct. 18-23	American Society of Maxillofacial Surgeons — New York Hilton and Americana, New York
Oct. 18-23	American Society of Plastic and Reconstructive Surgeons — New York Hilton and Sheraton Centre, New York
Oct. 23-25	American Academy of Neurological and Orthopaedic Surgeons — Caesar's Palace, Las Vegas
Oct. 25-29	American College of Chest Physicians — Hilton Hotel, San Francisco
Oct. 26-28	American College of Gastroenterology — Sheraton Bal Harbour, Bal Harbour, Fla.
Oct. 29-31	Society for Adolescent Medicine — New Orleans
Oct. 30-Nov. 1	AMA Sarasota Regional Meeting — Sarasota Hyatt, Sarasota, Fla.
Oct. 30-Nov. 1	American Senior Physicians Association — Sarasota Hyatt, Sarasota, Fla.
Oct. 31-Nov. 5	American Academy of Pediatrics — Minneapolis

STATE

Sept. 17-18	Southern Medical Association Medical Staff Leadership Conference — Hyatt Regency, Nashville
Sept. 21-22	Tennessee Valley Medical Assembly — Chattanooga Choo Choo
Oct. 29-30	Tennessee Society of Internal Medicine and American College of Physicians, Tennessee Region (Joint Annual Meeting) — Vanderbilt Holiday Inn, Nashville
Oct. 14-16	American Academy of Occupational Medicine — Hyatt Regency, Nashville

The continuing medical education accreditation program of the TMA has full approval by the Accreditation Council for Continuing Medical Education. An accredited institution or organization may designate for Category I credit toward the AMA Physician's Recognition Award those CME activities that meet appropriate guidelines. If you wish information as to how your hospital or society may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203.

IMPORTANT NOTICE

Published in this section are all educational opportunities which come to our attention which might be of interest to our membership. As some of these are very long, full year schedules, and others are detailed descriptions of courses, in order to conserve space, most of them will be published in only one issue of the Journal.

IN TENNESSEE

VANDERBILT UNIVERSITY

Clinical Training Program

Opportunities for advanced clinical education for physicians in family practice and in various subspecialties have been developed by the School of Medicine and the Division of Continuing Education of Vanderbilt University. The practicing physician, with the guidance of the participating department chairman, can plan an individualized program of one to four weeks to meet recognized needs and interests. The experience will include contact with patients, discussion with clinical and academic faculty, conferences, ward rounds, learning individual procedures, observing new surgical techniques, and access to excellent library resources. Experience in more than one discipline may be included.

Participating Departments and Divisions

Allergy & Immunology	Samuel Marney, M.D.
Anesthesiology	Bradley E. Smith, M.D.
Cardiology	Gottlieb C. Friesinger, III, M.D.
Chest Diseases	James D. Snell, M.D.
Clinical Pharmacology	John A. Oates, M.D.
Dermatology	Lloyd King, M.D.
Diabetes	Oscar B. Crofford, M.D.
Endocrinology	David Rabin, M.D.
	David N. Orth, M.D.
Gastroenterology	Steven Schenker, M.D.
General Internal Medicine	W. Anderson Spickard, M.D.
Hematology	Sanford B. Krantz, M.D.
Infectious Diseases	Zell A. McGee, M.D.
Medicine	Grant W. Liddle, M.D.
Neurology	Gerald M. Fenichel, M.D.
Obstetrics & Gynecology	Lonnie S. Burnett, M.D.
Oncology	Robert Oldham, M.D.
Orthopedics	Paul W. Griffin, M.D.
Pathology	William H. Hartmann, M.D.
Pediatrics	David T. Karzon, M.D.
Psychiatry	Marc H. Hollender, M.D.
Radiology	A. Everette James, Jr., Sc.M., J.D., M.D.
Renal Diseases	H. Earl Ginn, M.D.
Rheumatology	Theodore Pincus, M.D.
Surgery	
Cancer Chemotherapy	Vernon H. Reynolds, M.D.
General	H. William Scott, Jr., M.D.
Neurological	William F. Meacham, M.D.
Ophthalmology	James H. Elliott, M.D.
Oral	H. David Hall, D.M.D.

Pediatric	James A. O'Neill, M.D.
Plastic	John B. Lynch, M.D.
Renal Transplantation	Robert E. Richie, M.D.
Thoracic & Cardiac	Harvey W. Bender, M.D.
Urology	Robert K. Rhamy, M.D.

Eligibility: All licensed physicians are eligible. **Administrative Fee:** \$200 per week. **Credit:** AMA Physician's Recognition Award (Category I) and AAFP Continuing Education Accreditation. **Application:** For further information and application, contact Continuing Medical Education, Vanderbilt University Medical Center, Nashville, TN 37232, Tel. (615) 322-2716.

Continuing Education Schedule

Sept. 17-19	3rd National Frontiers in Nutrition Conference — Hilton Head, S.C.
Sept. 18-19	12th Annual Pediatrics Symposium: Immunology and Allergy
September	Blood Banking: Recent Medical and Technical Advances
October	J. William Hillman Visiting Professor in Orthopedics
Oct. 1-4	3rd Annual Medical Alumni Symposium
Oct. 28-30	Robert M. Buchanan Lecturer in Dermatology
Oct. 29-31	Update in Therapeutic Decision-Making (ACP Regional Meeting Scientific Sessions)
November	Annual Rhamy-Shelley Lectureship in Urology
Nov. 21-22	Update in Anesthesiology
Dec. 4-5	High Risk Obstetrics Seminar and the Everett M. Clayton Memorial Lecture (10 hours)

For information contact Division of Continuing Medical Education, Vanderbilt School of Medicine, Nashville, TN 37232, Tel. (615) 322-2716.

MEHARRY MEDICAL COLLEGE

Extended Continuing Education Program

Arrangements have been made with the following services and departments in the medical school to allow practicing physicians to participate in that service's activities for a period of one to four weeks. This program provides an opportunity for physicians to study in depth for a specified period. The schedule of activities is individualized in response to the physician's request by the participating department. The experience includes conferences, ward rounds, audiovisual materials and contact with patients, residents and faculty.

Participating Departments

Anesthesiology	Ramon S. Harris, M.D.
Family Practice	John Arradondo, M.D.
Internal Medicine	
Cardiology	John Thomas, M.D.
	Kermit R. Brown, M.D.
	Qamar A. Kahn, M.D.

Chest Disease	Joseph M. Stinson, M.D. Paul A. Talley, M.D. Edward A. Mays, M.D.
Dermatology	Thomas W. Johnson, M.D. David Horowitz, M.D.
Gastroenterology	Ludwald O. P. Perry, M.D. Buntwal M. Somayaji, M.D.
General Medicine	Edward A. Mays, M.D.
Hematology/Oncology	Robert S. Hardy, M.D.
Neurology	Calvin L. Calhoun, Sr., M.D. Gregory Samaras, M.D.
Obstetrics & Gynecology	Henry W. Foster, M.D.
Ophthalmology	Axel C. Hansen, M.D.
Orthopedics	Wallace T. Dooley, M.D.
Pathology	Louis D. Green, M.D. John C. Ashhurst, M.D.
Pediatrics	E. Perry Crump, M.D.
Surgery	
General	Louis J. Bernard, M.D.
Neurological	Charles E. Brown, M.D.
Thoracic and Cardiovascular	David B. Todd, M.D. Ira D. Thompson, M.D.
Urology	Marcelle R. Hamberg, M.D.

Fee: \$100 per week. **Credit:** AMA Physician's Recognition Award (Category 1), AAFP Continuing Education Accreditation, and Continuing Education Units by Meharry Medical College. **Application:** For further information contact Frank A. Perry, Sr., M.D., Director, Continuing Education, Meharry Medical College, 1005 18th Ave. North, Nashville, TN 37208, Tel. (615) 327-6235.

EAST TENNESSEE STATE UNIVERSITY

Sept. 19	Advances in Laboratory Medicine
Oct. 7-9	Infection Control
Oct. 16	Pediatrics Prep III: Neonatology
Nov. 2-6	CPR: Faculty Inservice

For information contact Office of Continuing Medical Education, East Tennessee State University, Quillen-Dishner College of Medicine, Johnson City, TN 37614, Tel. (615) 928-6426, ext. 204.

UNIVERSITY OF TENNESSEE

Continuing Education Schedule

This comprehensive listing of UTCHS courses includes programs of the Chattanooga, Knoxville, and Memphis units. The codes (C), (K), and (M) indicate the continuing education unit handling the arrangements for a particular program.

Sept. 12	(M)	Practice Management
Sept. 13	(K)	Practice Management
Sept. 17-18	(M)	13th Annual Conference of Mother, Fetus and Newborn
Sept. 18	(K)	25th U.T. Hospital Continuing Medical Education Program
Sept. 21-22	(C)	Practical Skills in Diagnosis and Treatment of Disease
Sept. 25-26	(M)	American Pediatric Association Workshop: The Physician and the Handicapped Child—Gatlinburg
Oct. 3-4	(M)	Ultrasound: A Primer for the Beginner
Oct. 12-14	(K)	Office Ultrasound—Gatlinburg
Oct. 15-17	(K)	2nd Annual Smoky Mountain Seminar in Obstetrics and Gynecology—Gatlinburg
Oct. 22-23	(M)	Medical Alumni Days
Oct. 26-28	(K)	Cancer Concepts 1981—

Gatlinburg
Nov. 13 (K) 10th Annual Internal Medicine Symposium

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Alternate months, third Tuesday; 6:30-8 p.m. (1.5 hrs. credit)

Sweetwater Community Hospital; Sweetwater, Tenn.

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Takoma Hospital; Greeneville, Tenn.

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If you would like assistance in planning a community-based CME program, contact the Associate Dean for CME and every attempt will be made to assist you through one of our three campuses.

For further information about any of these courses, please call the appropriate individuals below:

- (C) Mr. LeRoy J. Pickles, Chattanooga
Tel. (615) 756-3370
- (K) Ms. Kay Laurent, Knoxville
Tel. (615) 971-3345
- (M) Ms. Grace Wagner, Memphis
Tel. (901) 528-5547

or write or telephone: James E. Farris, Ed.D., Assistant Dean for CME, University of Tennessee College of Medicine, 800 Madison Ave., Memphis, TN 38163, Tel. (901) 528-5530.

SOUTHERN MEDICAL ASSOCIATION

Medical Staff Leadership Conference

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Sept. 17-18 Hyatt Regency Hotel, Nashville

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For information contact Jeanette Stone, Southern Medical Association, P.O. Box 2446, Birmingham, AL 35201, Tel. (205) 323-4400.

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Several eight-week courses in sonic medicine will be offered from Sept. 14-Nov. 6, 1981; Jan. 11-March 5, 1982; and April 26-June 18, 1982. *Credit:* 35 hours per week in AMA Category 1.

The following real time courses will also be given: Sept. 10-11, 1981 and Dec. 3-4, 1981 (obstetrics); Dec. 10-12, 1981 (pediatrics); March 22-26, 1982 (abdomen); April 15-16, 1982 (breast).

For information contact James F. Martin, M.D., Center for Medical Ultrasound, Bowman Gray School of Medicine, Winston-Salem, NC 27103, Tel. (919) 748-4505.

WASHINGTON UNIVERSITY

Dec. 10-12 Current Concepts in Cancer Therapy (co-sponsored by Missouri Chapter of the American Cancer Society)—St. Louis. *Credit:* 19 hours AMA category 1.

For information contact Office of CME, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110, Tel. (314) 454-3873.

UNIVERSITY OF LOUISVILLE

Sept. 14 John I. Perlstein Lectureship in Pediatrics
Oct. 28 Nutrition in Older Children
Oct. 29-30 15th Annual Newborn Symposium

For information contact Billy F. Andrews, M.D., Department of Pediatrics, University of Louisville School of Medicine, Health Sciences Center, Louisville, KY 40292.

MEDICAL COLLEGE OF GEORGIA

Sept. 23-25 Neonatology—The Sick Newborn—DeSoto Hilton Hotel, Savannah, Ga. *Credit:* 17.16 hours AMA Category 1. *Fee:* \$135.

For information contact Division of Continuing Education, Medical College of Georgia, Augusta, GA 30912. Tel. (404) 828-3967.

OF SPECIAL INTEREST

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Sept. 25-27 2nd National Seminar on Community Cancer Care (cosponsored by the Clinical Oncology Center)—Hyatt Regency, Indianapolis.

For information contact Office of Continuing Medical Education, Methodist Hospital of Indiana, Inc., 1604 N. Capitol Ave., Indianapolis, IN 46204.

INT'L. MEDICAL EDUCATION CORP.

Clinical Management of Coronary Disease and Exercise Testing

Dec. 4-5 Hyatt Regency, Atlanta

Arrhythmias and Cardiac Ischemia

Oct. 23-24 Peachtree Plaza, Atlanta

Nov. 6-7 Le Pavillon, New Orleans

For information contact Director of CME, International Medical Education Corp., 64 Inverness Drive East, Englewood, CO 80112, Tel. (800) 525-8646, ext. 105.

AMERICAN ACADEMY OF ALLERGY

Oct. 30-31 Allergy and Immunology for the Clinician—Hyatt on Hilton Head Island, S.C. *Credit:* 14 hours AMA Category 1.

For information contact A. J. Kimber, American Academy of Allergy, 611 E. Wells St., Milwaukee, WI 53202, Tel. (414) 272-6071.

CAT Scanners Save Money In Treating Cancer

Computerized tomography—hailed as a major advance in medical technology but also held up as a prime example of why medical costs have risen—actually saves money when used to guide the radiation treatment of cancer, says a report in the Sept. 19 *Journal of the American Medical Association*.

A body scan costs around \$250. Cost of therapy which follows the body scan probably averages \$12,000 for cancer treatment. But total cost of treatment when local control of the tumor fails is estimated at \$36,000. There are many fewer failures of initial treatment when the exact diagnosis of the CAT scan is available to the doctor.

With the use of the CAT scan, there is a better than even chance that the resulting therapy will bring local control of the tumor. This knowledge is gained at a cost of \$250 in a treatment program that will cost \$12,000 altogether. Thus it would be poor economy indeed to fail to use the scanner to save money on health care costs. When the initial treatment fails, there is an additional \$24,000 in costs required to cope with the tumor.

Senility Sometimes Caused By Curable Ailments

It is generally accepted that there are changes in some intellectual functions in the elderly, just as there is some loss in physical abilities with aging, but normal aging does not include gross intellectual impairment, confusion, depression, hallucinations, or delusions. Such symptoms are due to disease and indicate the need for diagnosis and treatment.

Estimates are that some 10% of individuals older than 65 years have noticeable intellectual impairment. Some 10% to 20% of those individuals having such impairment have reversible conditions that will improve with treatment.

Early symptoms of senile dementia as noted by relatives, employers or friends, and frequently by the patients themselves, are failing attention and memory and declining mathematical ability. Errors of judgment, irritability, personality changes, loss of sense of

humor, or poor orientation may indicate that intellectual function is deteriorating.

This can be caused by certain conditions that cannot be cured. But also it can be caused by adverse effects of medications, and by illnesses involving heart, lungs, kidneys or liver, glandular imbalances, body fluids and mineral upsets, too little oxygen anemia, infections, nutritional deficiencies, and becoming too hot or too cold. Many of these conditions can be corrected.

Even if the elderly patient has an irreversible disorder, as do many, frequently much can be done to reduce the severity of its manifestations through treatment of the symptoms and supportive therapy. Those around the elderly person whose mind is failing must be aware that the patient has difficulty with orientation as to time, place and person, and needs to be constantly reminded.

Those with intellectual impairment should be kept in familiar surroundings if at all possible, as it is difficult for them to cope with unfamiliar places.

Doctors should be aware of the extreme sensitivity of the aged brain to a wide variety of medications. Ordinary doses sometimes lead to problems.

Finally, a key feature in maintaining mental health in old age seems to be continued mental as well as physical activity.

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Indications

Cyclacillin has less *in vitro* activity than other drugs in the ampicillin class and its use should be confined to these indications: Treatment of the following infections:

RESPIRATORY TRACT

Tonsillitis and pharyngitis caused by Group A beta-hemolytic streptococci

Bronchitis and pneumonia caused by *S. pneumoniae* (formerly *D. pneumoniae*)

Otitis media caused by *S. pneumoniae* (formerly *D. pneumoniae*) and *H. influenzae*

Acute exacerbation of chronic bronchitis caused by *H. influenzae**

*Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to *H. influenzae*.

SKIN AND SKIN STRUCTURES (integumentary) infections caused by Group A beta-hemolytic streptococci and staphylococci, non-penicillinase producers.

URINARY TRACT INFECTIONS caused by *E. coli* and *P. mirabilis*. (This drug should not be used in only *E. coli* and *P. mirabilis* infections other than urinary tract.)

NOTE: Perform cultures and susceptibility tests initially and during treatment to monitor effectiveness of therapy and susceptibility of bacteria. Therapy may be instituted prior to results of sensitivity testing.

Contraindications Contraindicated in individuals with history of an allergic reaction to penicillins.

Warnings Cyclacillin should only be prescribed for the indications listed herein.

Cyclacillin has less *in vitro* activity than other drugs of the ampicillin class. However, clinical trials demonstrated it is efficacious for recommended indications.

Serious and occasional fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin. Although anaphylaxis is more frequent following parenteral use, it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with history of sensitivity to multiple allergens. There are reports of patients with history of penicillin hypersensitivity reactions who experienced severe hypersensitivity reactions when treated with a cephalosporin. Before penicillin therapy, carefully inquire about previous hypersensitivity reactions to penicillins, cephalosporins and other allergens. If allergic reaction occurs, discontinue drug and initiate appropriate therapy. Serious anaphylactoid reactions require immediate emergency treatment with epinephrine. Oxygen, I.V. steroids, airway management, including intubation, should also be administered as indicated.

Precautions Prolonged use of antibiotics may promote overgrowth of nonsusceptible organisms. If superinfection occurs, take appropriate measures.

PREGNANCY: Pregnancy Category B. Reproduction studies performed in mice and rats at doses up to 10 times the human dose revealed no evidence of impaired fertility or harm to the fetus due to cyclacillin. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, use this drug during pregnancy only if clearly needed.

NURSING MOTHERS: It is not known whether this drug is excreted in human milk. Because many drugs are, exercise caution when cyclacillin is given to a nursing woman.

Adverse Reactions Oral cyclacillin is generally well tolerated. As with other penicillins, untoward sensitivity reactions are likely, particularly in those who previously demonstrated penicillin hypersensitivity or with history of allergy, asthma, hay fever, or urticaria. Adverse reactions reported with cyclacillin: diarrhea (in approximately 1 out of 20 patients treated), nausea and vomiting (in approximately 1 in 50), and skin rash (in approximately 1 in 60). Isolated instances of headache, dizziness, abdominal pain, vaginitis, and urticaria have been reported. (See WARNINGS) Other less frequent adverse reactions which may occur and are reported with other penicillins are anemias, thrombocytopenia, thrombocytopenic purpura, leukopenia, neutropenia and eosinophilia. These reactions are usually reversible on discontinuation of therapy.

As with other semisynthetic penicillins, SGOT elevations have been reported.

As with antibiotic therapy generally, continue treatment at least 48 to 72 hours after patient becomes asymptomatic or until bacterial eradication is evidenced. In Group A beta-hemolytic streptococcal infections, at least 10 days' treatment is recommended to guard against risk of rheumatic fever or glomerulonephritis. In chronic urinary tract infection, frequent bacteriologic and clinical appraisal is necessary during therapy and possibly for several months after. Persistent infection may require treatment for several weeks.

Cyclacillin is not indicated in children under 2 months of age.

Patients with Renal Failure: Cyclacillin may be safely administered to patients with reduced renal function. Due to prolonged serum half-life, patients with various degrees of renal impairment may require change in dosage level (see DOSAGE AND ADMINISTRATION in package insert).

Dosage (Give in equally spaced doses)

INFECTION	ADULTS	CHILDREN*
Respiratory Tract		
Tonsillitis & Pharyngitis	250 mg q.i.d.	body weight < 20 kg (44 lbs) 125 mg q.i.d. body weight > 20 kg (44 lbs) 250 mg q.i.d.
Branchitis and Pneumonia		
Mild or Moderate Infections	250 mg q.i.d.	50 mg/kg/day q.i.d.
Chronic Infections	500 mg q.i.d.	100 mg/kg/day q.i.d.
Otitis Media	250 mg to 500 mg q.i.d.†	50 to 100 mg/kg/day†
Skin & Skin Structures	250 mg to 500 mg q.i.d.†	50 to 100 mg/kg/day†
Urinary Tract	500 mg q.i.d.	100 mg/kg/day

*Dosage should not result in a dose higher than that for adults.

†depending on severity

Medical Practice in Early Nashville

DAVID R. PICKENS, JR., M.D.

The thought behind this paper is to bring to mind the practice of medicine in early Nashville prior to our current medical era. Nothing stands still; if we are not progressing, we are going backward; but medicine continues forward. We should not forget the fortitude, originality, and concepts of some of those who preceded us 200 years ago.

When the pioneers came to Middle Tennessee, they brought some knowledge, their cultural heritage, and much superstition about the human body and the treatment of disease.

There were few regular physicians on the frontier. For many years the only doctor in Nashville was "Granny Nell," an old full-blooded Shawnee Indian woman who ran a small tavern on the square. She treated patients with herbs and other Indian remedies. A paper by Dr. Thomas Woodring states that "She only got drunk on Christmas, and used to ride her horse galloping around the square several times until she fell off."

The Nashville inhabitants were mostly healthy. From the time of the first settlement until 1784, not a single trained physician was in this area. One inhabitant, named "Winterbotham," stated, "Our physicians are fine climate, healthy, robust mothers and fathers,

playing, a plentiful diet, and enough exercise."

Of course, much medicine was practiced in each family, and local prescriptions were exchanged by the men just as the women exchanged recipes for bread and cakes.

Doctors were usually not military men or political leaders in that era. In fact, doctors were excluded from holding office. An ordinance was passed in the state of Franklin (now East Tennessee) in November, 1785 that "no one could hold office unless he had certain property, unless he was a Christian who believed in the Bible, in Heaven and Hell, and in the Trinity, and with the exception that no office could be held by doctors, clergymen, lawyers, amoral men, Sabbath breakers, profane swearers, gamblers, or drunkards." This placed the doctor in a special category. During this time, physicians had to depend on other pursuits for support.

The early settlers were hardy, healthy people who lived in the open air and sunshine. They were resourceful and self-reliant. They had practical knowledge for emergency use, and home care for injuries and disease.

In John Sevier's diary, extending from 1790 to 1815, may be found a record of remedies used for various illnesses. Many of these were old and were used when no doctor was available. The drugs available to people at that time were the vilest-tasting of drugs, such as rhubarb, aloes, and even a package of Peruvian bark with which to make a concoction to stop chills. Calomel was

Presented at the annual meeting of the Nashville Surgical Society, Nashville, November, 1980.

Reprint requests to 1919 Hayes St., Nashville, TN 37203 (Dr. Pickens).

EARLY NASHVILLE MEDICINE/Pickens

used to salivate the patient if the first bleeding, cupping, or purging did not cure or kill him. A few remedies, for example, were: for snake bite—cocklebur leaves boiled in new milk; for rheumatism—take as small amount of sulfur as will lay on the point of a case knife, mix it with honey, and take for nine consecutive mornings. On the seventh morning bleed both feet on the inside. After taking the sulfur and honey infuse the bigness of your thumb of seneca snake root in one quart of brandy or whiskey; drink a glass every night or morning as you may choose; take care not to take cold. Intermittent types of fever were also treated; for example, malaria was treated with a concoction of dogwood bark. There was much to be learned in the care of the ill patient.

Indians were a common source of trouble in the frontier areas; tomahawk and gunshot wounds, as well as scalped heads, did produce a need for local treatment. Smallpox was a dread disease. There was no tuberculosis, but malaria and rheumatism flourished.

The first operation performed in the settlement of Nashville followed an incident on Jan. 11, 1781, in which a small party of Indians appeared in the neighborhood of the settlement. They fired from ambush in the canebrakes near French Lick "Sulfur Springs," broke the arms of John Tucker and Joseph Hendricks, and shot down David Hood, whom they scalped. The Indian's knife was very dull and the scalp did not yield very readily so he took a new hold and sawed away until the scalp pulled off. After scalping him they stomped upon him to dislocate his neck and left him for dead. Being a rather tough frontiersman, he lay perfectly still until the Indians disappeared and then cautiously peeked out. When he found himself alone, he slowly arose and crawled toward the bluff city. The men from the fort found him and brought him in.

On this same day James Robertson had just returned from the wilderness trail to Kentucky with a supply of powder and lead. He went to Freedom Station to see his wife, who that day gave birth to his son, the first male child to be born in the city of Nashville. This child was the eminent Dr. Felix Robertson, later mayor of the city. The following night, James Robertson returned to the fort and found Mr. Hood had not died, and indeed Hood said he thought that he

might get well if he had half a chance. Robertson told him that he had a *whole* chance, dressed his head and treated his scalp. James Robertson had learned from a traveling French surgeon how to treat scalp wounds. He took a cobbler's awl and perforated thickly the whole naked space, going through the outer table of the skull so that granulation tissue might grow up and unite to form a covering for the denuded skull before it should die and exfoliate, exposing the brain. This operation became so common that there were persons in every fort or stockade who could perform it. James Robertson thus became the first surgeon in Nashville. David Hood lived for many years afterward. We must remember that this was 200 years ago, which in time of our present world does not seem very long.

As the community grew, the first true physician, Dr. James White, from Carolina, settled in Nashville in 1784. He had been educated in Edinburgh and St. Omer, France. He had studied divinity, law, and medicine, and was a man of very distinguished general education. He apparently possessed a great number of talents, having excellent powers of conversation on subjects of grave and humorous nature, but he would go on sprees of drinking and would occasionally dress up in buckskin and march through the streets with a gourd of whiskey under his arm, compelling every person he met to have a drink. One of his friends, Major W. T. Lewis, a very genteel, respectable and wealthy gentleman, once refused to take such a drink, with the result that Dr. White knocked him down and called him a "damned aristocratic rascal." When not in this state, Dr. White was apparently gentlemanly, kind, and effective. His ability gained him the admiration of many, and when he was sober, he was admired by learned and talented people. He was the first delegate sent to Congress from Nashville. On one of his trips from Congress Dr. White met a girl in Carolina whom he decided to take with him. He dressed her in boy's apparel, placed her on a horse and passed her off as his servant. Before they reached Nashville, however, on his return trip she was delivered of a son.

Dr. White purchased land in Whites Bend, some 6,000 acres enclosing the bend of the Cumberland six to eight miles below Nashville. He built a log cabin, and there with his son and girl companion spent the remainder of the time that he lived in this area. He sold the land in 1797

to Tait and Stothart, merchants of Nashville, and moved to Louisiana.

Professional activity was limited as the early doctor was confronted with numerous hardships, with access to patients only through canebrakes and forests. He was often called out late at night and would have to cross swollen rivers with no bridges, swim his horse across, or just swim the river himself. Rain, sleet, and snow were common detriments. A story is told in the *Cumberlands* about how one physician removed his clothing, tied it in a bundle on the horse's back, then held onto the horse's tail to cross to the opposite bank. It is also mentioned in Dr. E. G. Rodger's book that one physician after responding to nature's call had to be thawed free from his saddle before he could dismount. The physicians often wore large hand-woven shawls which were loose fitting, and large enough to protect both the rider and the horse. They were not only warm, but also turned water. Another story is told about a doctor's wife who became a doctor after her husband was killed by Indians. She was also attacked by wolves, but survived to pursue the skills taught her by her husband. Many doctors won community respect because they answered calls to rich and poor alike.

Early medications were based on folklore as well as habit. Teas and tonics were among the first things utilized in the treatment of the sick. Oftentimes a tea was made from whatever happened to be present: the bark of a peach tree, or some herb picked in an adjacent garden, hence the traditional reference to a father's lashing of a young son as "a dose of peach tree tea." This particular medication was good for the tummy-ache. Some teas were called "bitters" and contained the bark of a tree as the main ingredient. The commonest of these were sarsaparilla, dogwood, wild cherry, and poplar bark. They were mixed with whiskey and were good family tonics found in early medicine cabinets. Since wild cherry will kill cattle, one wonders what it would do to patients. A spring tonic of bitters was described as being made of "a quart of vinegar, one crushed horseradish, three rusted nails, the ash of a portion of burned grapevine, one teaspoon of sap crushed from garden rue—one teaspoon of anvil dust being substituted for rusted nails on occasion." This medication was good for worms, the ashes supplied potassium, the iron was good for the blood, and the vinegar was to drive the water out of the system. Dogwood

bark contained quinine and was used to control fever. Among the remedies that sounded the least palatable was a tea given to patients to help tuberculosis. This was made from cow manure and was given twice daily. There were various concoctions made from molasses, sulfur, sassafras root, and catnip. Turpentine, coal oil and camphor mixed in varying amounts were also used. One remedy for rheumatism which might be considered appetizing these days was a mixture of whiskey and pokeberry root. Poultices, based on either vegetable, mineral, or animal material, were used in many home remedies. Minerals such as sulfur, iron and copper were added to the animal oils to form local remedies applied externally. Oftentimes they were effective for their soothing effect and as disinfectants. The use of the dirty stocking around the throat, hot wood ashes to the head, fresh cow manure poultices for arthritis, pokeroot poultices, and towels covered in lard was common. Salt and other types of herbs were added to these.

As minerals increased in medicine, more complicated formulas ensued and the family doctor exchanged his medicine kit for a prescription pad, as a pharmacist was better than the local physician at putting together "herbs."

Emerging from this period are sarcastic but amusing stories which survive, some of them at the patient's expense. It is said that a certain local doctor was acting as a surgeon for both the North and the South during the War Between the States. When an amputation was to be done, a number of men would hold the patient while his leg was removed. If a soldier was a southerner, the amputation was made as low as possible below the knee. If he was a yankee, the amputation was made as high as possible. One instance is given in which a boiler exploded and a number of men were killed. One man was bleeding profusely when the physician arrived. The physician grabbed a handful of soot from a chimney and placed it on the wound. This stopped the bleeding, and saved the man's life.

The following was prescribed for sore eyes. A handful of leeches were secured from an old pond, and one was stuck to the affected covering of the eye and left there until the blood clot or irritation cleared. This was repeated as many times as necessary by changing the leech or by sprinkling the leech with salt, which caused the blood to escape from it so that the same leech might be used repeatedly. It was stated that three

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applications of this were enough.

Much treatment was based on superstition. Wearing a piece of lead or a penny around the neck was to ward off disease. We all remember Tom Sawyer's description of getting rid of warts by using a dead cat which was thrown over into a graveyard at midnight; this action was accompanied by saying "Cat follow ghost, warts follow cat, and I am through with you." There is much to be learned from superstitions, but as we read the descriptions of these, we realize how far medicine has advanced.

Some women became midwives, filling a definite need in the area. The difficulty of travel, the lack of communication, and the scarcity of trained doctors gave added importance to the part women played in the early practice of medicine. The woman called a "midwife" subsequently became known as "the old granny," and is still important in many parts of the South. The midwives became expert in their duties, as physicians were oftentimes far away when needed.

An example of tradition playing a part in the survival of the infant is found in the practice of ironing the cloth of the bandage of a newborn child. The iron was used overly warm so that the cloth was purposely scorched; some of the germs in the cloth might have been destroyed by the hot iron, so that the umbilical area was covered with a sterilized or partly sterilized bandage. A description is also given for treatment of a mother's breast when the baby could not utilize the milk. Not only puppies but also goats and pigs were utilized, and it is said that after one woman used a pig for four weeks, the pig followed her in and out of the house squealing. All midwives had their own methods of handling problems associated with pregnancy or the birth of a child.

The young surgeon received his experience under the tutelage of older ones. Much experimentation and dissection was done by ambitious and well-meaning students. The story is told of a sick old lady tramp who was traveling through the country. She became ill and died, and the doctor's wife contributed the dress in which to bury the woman. Several days later the doctor's wife, while cleaning under a medical student's bed, found the same dress. The students had dug up the body, dissected it, and boiled the bones and put them on the barn roof to dry.

Many women were as adept as men in rendering first aid, and in sewing up wounds. Silk thread or carpet thread was available, and was used for sewing up cuts and flesh wounds of all types. Surgery was done without an anesthetic, and amputations were done and patients survived in spite of a lack of aseptic techniques. There was some risk to the physicians doing the operations at that time, as small wounds frequently resulted in poisoning and death of the medical man in attendance. Much early surgery was related to broken bones, as well as teeth and other oral problems. Cauterization by chemicals or hot irons was used as part of the surgical armamentarium.

The barber pole was evidence that a person would be willing to cut into the skin, as people might be bled for fevers, paralysis, epilepsy, high blood pressure, pregnancy, and even sore eyes. Usually a pint to a quart of blood was taken at a time. Apparently this practice continued into the late 1870s and 1880s.

The barber surgeon was also the apothecary and the herbalist, and often performed dental extractions. Bleeding was done by opening a vein in the forearm. The patient would grab a stick on one end while the other end rested on the floor. This allowed his arm to stay out full length. The stick, or "barber pole" was stained with blood which had run down the patient's arm. The pole thus became known for its red and white stripes. One could have these operations performed wherever a barber pole was displayed.

Early doctors knew very little about the causes and nature of contagious disease, and had no knowledge of vaccines and serums. Such diseases as typhoid fever, scarlet fever, and diphtheria were very common. Many children's diseases went undiagnosed. Quarantine and sanitation were basically unknown even though some people did change their clothing after visiting a sick friend or patient. Bleeding, turpentine, and herbs were used in the treatment of fever. Treatment of malaria was handled by stopping up cracks in the house, allowing the patient to have three chills, giving him warm water and subsequently pure brandy with bitters which contained quinine from the dogwood bark. Some sentiment was also expressed that typhoid fever was caused by "evil spirits."

There were faith doctors in practice in this era, and psychological cures were attributed to such as one Frenchman, M. Cove, who gained a repu-

tation in Nashville from results of the monotonous phrase being quoted every day: "Every day in every way I am growing better and better." Some persons claimed supernatural powers, and much mystery was present in the treatment by the faith doctor. Families carefully guarded such statements as were made to the patients, but oftentimes an older member of the family possessed the power, and transferred it to someone in his family specifically. The "touch" of a physician was an important aspect of medicine—and still is.

It was stated that hair was made to grow on a bald head merely by coating the bald spot with honey, after which the head was massaged with a raw onion.

There were early descriptions of the use of animals in medical practice. One of these was the occasional deer that possessed a stone in its stomach. This stone was considered a "mad stone" and had many attributes of cure attached to it. The stone was a carefully guarded possession and persons came for miles around to use it on their wounds and other physical ailments.

Undertakers were described in early literature. People tended to prepare their own tombstones, build their own coffins, and execute wills in anticipation of death. A death in the family was accepted with a calm serenity that prompted the continuation of daily activities with a sense of duty.

The doctor received pay for his services in early days. His fee was comparably small, but often he was paid for a long trip to stay with a pregnant wife or patient by receiving room and board for several days. Occasionally he received a nice young colt or even the sum of \$3.00 or \$4.00. Many commodities were traded in exchange for services. It was not unusual for a doctor to stay for a meal with a family while his horse was eating in the barn. Many doctors made trips of three to five miles at a rate of \$1.50 to \$2.00 a trip. A good chestnut rail was often substituted for money at 50 cents per 100.

On March 5, 1821, at a meeting of the following physicians—Dr. James Overton, Dr. Felix Robertson, Dr. John Waters, Dr. Boyd McNairy, Dr. R. A. Higginbotham, Dr. A. C. Goodlett and Dr. James Roane—for the purpose of considering fees which they would charge for medical services, it was agreed, after Dr. Robertson was placed in the chair and Dr. Roane was made secretary, to charge as follows:

For visit in town	\$ 1.00
For riding in country, per mile	1.00
Any visit out of town, not less	2.00
For bleeding	1.00
For extracting tooth	1.00
Cathartics and emetics, each	.50
For pills, half dozen	1.00
For obstetrical case	20.00
For gonorrhoea case	10.00
For L V	20.00
For powders, per dozen	1.50
Consultation	5.00
Prescription at shop	1.00
Amputation of thigh, leg and arm, each	50.00
Vaccination	2.00
Trepanning	50.00
For visit at night, after abed	5.00
Night visit, double price of day	2.00
Cupping	2.00
Blister	1.00
Arteriotomy	2.00

One of the earliest surgeons in Nashville was Dr. James Overton, who moved to Nashville in 1818 and was a renowned physician of the era. He was the first man here to operate on a large abdominal tumor. As it turned out, the tumor was a pregnant uterus and the lady subsequently delivered a normal child. Dr. Overton's comment, which is still true today, was made to an assistant as he picked up a burnished scalpel. His hand being ungloved for the occasion, he said "To hold it like a pen is actually axiomatic. It gives the digital apparatus control of it, and its achievement, indeed, may be compared to a pen. That little instrument controlled in its movement by genius and cultivation, secures immortality." Dr. Overton's later comment, after his successful unsuccessful operation, was, "I did not retire from the practice of medicine; I was victorious in defeat. The practice retired from me and left me in triumph for the possession of the field."

A common operation of the era was removal of stones from the bladder. In 1821 Dr. Overton removed three stones from the bladder of a Mr. Condon in Nashville, and Dr. Felix Robertson subsequently removed a stone from the bladder of a Mr. Roland, who was 83 years old. The stone was 3½ inches in circumference and weighed 1½ ounces.

The first ovariectomy in Tennessee was done by Dr. Ephraim McDowell in 1832 on Mrs. Overton, the wife of Judge John Overton, and a relative of Dr. James Overton. Mrs. Overton and her husband resided at Traveler's Rest on Franklin Road. A fee of \$500 was charged for

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this operation, but as Mr. Overton was very wealthy, he paid the doctor \$1,500. In 1859, Dr. W. H. Buchanan, a very prominent surgeon of the time, performed an amputation of the hip joint on a 14-year-old boy. This was the first operation of its kind in Tennessee.

Surgical instruments were developed to suit the fancy of the individual. Some were shaped like a key with a hook attached, to twist or wrench teeth from the jaw. There was also a gum lancet and a dull knife, which was often sharpened on the doctor's boot before use. Surgery was practiced under difficulty, as anesthesia was unknown until the 1850s, and antiseptics not until years later. The early practice of surgery was often shrouded in mystery. Some superstition as well as some feeling of religious attachment was associated with the incising of human flesh. Pain in the absence of anesthetics was, of course, a real deterrent.

The men who received the degree of medicine were limited in their medical education and constituted the small minority of the medical profession of this area. A diploma from some medical college meant that the physician had either read *Gunn's Domestic Medicine* or had attended one course of lectures and learned to believe in the erroneous idea that a bandage to a fractured limb could never be too tight. It was unquestionably true that a large portion of those who practiced in Nashville were not graduates of any medical college. Some young men would attend "medical lectures" given by other physicians, which incidentally was the way medical societies were started. Although the success of a physician depended greatly upon the confidence people had in him, it was at once true that competence bore slight relationship to education, training, and experience. The chief factor in a young man's successful training was the degree of interest which an older, more established doctor took in him. This was especially true in the Tennessee mountain region, where one physician had sent dozens of young doctors "out to help the citizens because of his interest in their personal training and his direct influence." These doctors did a great deal of experimentation. Occasionally they were successful, and often became skilled in the treatment of one human ailment. The area's earliest attempt to secure a law

for the regulation of the practice of medicine was in 1817, but it was not until 1899 that licenses were required for those who practiced in the state of Tennessee.

Woodring's *Pioneer Medicine and Early Physicians in Nashville* contains more interesting information on the first physicians of Nashville and covers a span from 1780 to the early 1900s. The Nashville Medical Society, organized in 1821 with Dr. Felix Robertson as first president, continued to function in the years prior to the War Between the States until June, 1860, when members entered the service and the society was adjourned. On Aug. 16, 1865 a meeting was called by the secretary, Dr. George Blackey, and the Society resumed its activity.

There were several societies of medicine organized in Nashville. In 1872 the Edgefield Medical Society was organized with Dr. George R. Williamson as president. This was the beginning of the Davidson County Medical Society. In April, 1886, the Nashville Academy of Medicine and Surgery replaced the Nashville Medical Society. It was the predecessor of the Nashville Academy of Medicine — Davidson County Medical Society.

In 1855, Dr. Paul Eve remarked in his dissertation on physicians when he addressed the Tennessee Medical Association, "You have but commenced a science for the full acquisition of which a lifetime is too short; one demanding the concentration of the highest intellect, and the development of the best affections of the heart; a profession worthy of the loftiest genius and noblest powers of man; a calling honored by the Deity himself who, when on earth, consecrated it as a means of relieving suffering humanity."

Any comments about the current day of science and medicine must include the fact that older doctors treated the whole patient; they treated the spirit, many times with witchcraft; they treated their patients, many times with herbs, but mainly they gave love, understanding, and patient, tender care. These were the qualities that distinguished early medicine. We should not forget that in our day of modern medicine, when everything from one's heart to brain is operated on, we *still* must remember that the *patient* is an entity, and requires solace of the spirit, mind and body, tempered with kindness, understanding and humility from the physician.

Scoliosis Associated With Tuberous Sclerosis

ROBERT R. MADIGAN, M.D. and SIDNEY L. WALLACE, M.D.

Introduction

Bourneville first described the clinical entity of tuberous sclerosis in 1880, and the disease is sometimes called Bourneville's disease. It was not until 1908, however, that Vogt postulated the now classic triad of adenoma sebaceum, mental deficiency and epilepsy.^{1,2} In addition to the classic triad, the patients with tuberous sclerosis may also have other neurocutaneous visceral or osseous abnormalities.³⁻⁵ These cutaneous lesions include angiofibromas, fibromas, and Sjögren's plaques. Hamartomas are found in the brain, eyes, kidneys, heart and bones. Additional bony lesions include sclerotic changes in the lumbosacral spine or pelvis and irregular cortical thickening of the metatarsals and metacarpals. There is minimal reference in the literature to the association of scoliosis in tuberous sclerosis.⁵

Methods

The population of Greene Valley Developmental Center, Greeneville, Tenn., and Clover Bottom Developmental Center, Nashville, Tenn., two institutions for the mentally retarded in the state of Tennessee, were reviewed for patients with tuberous sclerosis. Twelve residents with classic triad of adenoma sebaceum, mental deficiency, and epileptiform seizures were included in the study. All of the residents were evaluated clinically and roentgenographically by one of us for scoliosis.

There were ten women and two men. The mean age was 25 years, 10 months with a range of 17 years to 47 years, 4 months. Nine were able to walk; the remainder were confined to wheelchairs.

All the affected residents had a complete orthopedic examination with particular reference to examination of the spine. In addition, all resi-

dents had a standing or sitting AP roentgenogram of the thoracolumbar spine. The magnitude of the scoliosis was measured using the method of Cobb, and only curves greater than 10° with structural changes were judged to have scoliosis.

Results

Five individuals had clinical evidence of scoliosis with a positive forward bend test. Six individuals had roentgen evidence of scoliosis with curves greater than 10°. As expected the single resident with negative clinical scoliosis but positive roentgen scoliosis had a mild curve, a right thoracic curve of 12° and a left lumbar curve of 13°, but both curves demonstrated rotation and definite structural changes. The magnitude of the curves varied from 12° to 78°, with a mean of 37°. There were four double, or "S" shaped, curves and two single, or "C" type, curves. Both "C" curves were seen in residents who demonstrated spasticity. They had variable flexibility, from extremely flexible to totally rigid, on lateral bend film.

Four residents evidenced clinical spasticity; all were spastic quadriplegics, with both clinical and roentgen scoliosis; two had single "C" type curves, and two had double "S" type curves.

Nine individuals could walk unassisted, and three of them had scoliosis demonstrated roentgenographically. The three wheelchair patients all had scoliosis by roentgenography and all were spastic. The remaining spastic patient could walk.

Discussion

Tuberous sclerosis is a rare disease which is often found in the institutions for the mentally retarded. Very little reference has been made to the relationship between tuberous sclerosis and scoliosis. Of 32 patients reviewed by Smith,⁵ only two had scoliosis. Kormar³ evaluated spine roentgenograms of 58 patients with tuberous sclerosis and made no mention of scoliosis. Reed⁴ studied 120 individuals with tuberous

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SCOLIOSIS/Madigan

sclerosis, and despite paying particular attention to osseous lesions also did not mention scoliosis. It has been our impression that the patients under our care with tuberous sclerosis exhibited a high incidence of scoliosis, and we therefore evaluated these patients to document this impression.

Fifty percent of the individuals in this study demonstrated roentgenographic evidence of scoliosis. All patients with scoliosis demonstrated structural changes (lack of flexibility on lateral bend roentgenograms, and rotation demonstrated roentgenographically) with curves greater than 10°. There were no particular characteristics to distinguish these curves, and they most closely resembled the pattern seen in cerebral palsy.⁶

One third of the individuals had spastic quadriplegia and all had scoliosis. Previous studies indicate that approximately 75% of the patients with spastic quadriplegia had scoliosis.⁶ The three residents who were wheelchair bound all had scoliosis and all were spastic. It would ap-

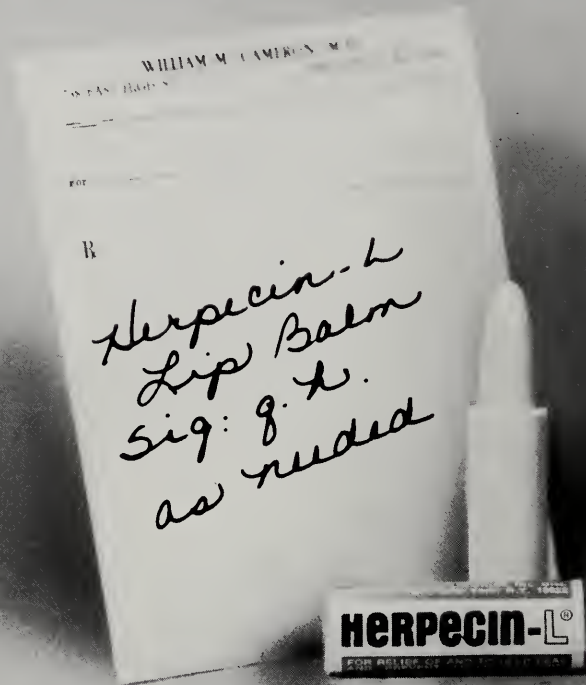
pear that decreased ambulatory ability is related to spasticity, and not to the tuberous sclerosis or scoliosis.

We feel that all individuals with a diagnosis of tuberous sclerosis should be screened both clinically and roentgenographically for scoliosis, especially if these individuals also demonstrate clinical spasticity. It is even more important with the advent of modern scoliosis treatment programs, since these individuals can effectively be treated to prevent progression of their curves and maintain their functional status.

REFERENCES

1. Hasegawa J, Ichikawa RE: Tuberous sclerosis complex. Unusual case of adenoma sebaceum, tuberous sclerosis, and extensive bone lesions. *JAMA* 1973;150:153, 1960.
2. Morgan JE, Wolford F: The early history of tuberous sclerosis. *Arch Dermatol* 115:1317-1319, 1979.
3. Komar NN, Gabrielsen TO, Holt JF: Roentgenographic appearance of lumbosacral spine and pelvis in tuberous sclerosis. *Radiology* 89:701-705, 1967.
4. Reed WB, Nickel WR, Champion G: Internal manifestations of tuberous sclerosis. *Arch Dermatol* 87:715, 1963.
5. Smith TK, Gregersen GG, Samilson RL: Orthopaedic problems associated with tuberous sclerosis. *J Bone Joint Surg* 51-S:91-102, Jan 1969.
6. Madigan RR, Wallace SL: Scoliosis in the institutionalized cerebral palsy population. *Spine*, to be published.

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Medical Care in the '80s

The New Role for Government and Health in the 1980s

EDWARD N. BRANDT, Jr., M.D.
Assistant Secretary for Health
Department of Health and Human Services

The medical education currently available and that has been available in this country for the past years has certainly been outstanding. There is no question that the physicians practicing medicine today and rendering service to the people of America are well educated, well informed, and practicing good medicine. However, I think that Dr. Simmons has really painted the picture very well. Although he and I did not talk about our presentations, he has set the scene for me better, I think, than we could have done together had we planned it.

I would like to spend just a little time talking to you about what we see as the federal government's role in the changes that we anticipate in the next decade and between now and the year 2000. Our program has been planned around three basic principles. The first of these is to decrease federal spending. Clearly, President Reagan has pointed out, we live in a time of what he refers to as "punishing inflation." Federal spending must be reduced in order to get inflation under control. That is one of our goals. As an example, the Public Health Service includes the six agencies that Dr. Nesbitt told you about. The largest of these, National Institutes of Health, now has approximately 53,000 employees located all over the world. I found recently that we have an installation in Hong Kong because we are responsible for refugees that come to the United States through that port. As of Oct. 1, the beginning of the 1982 fiscal year,

my challenge is to reduce that level of employment down to 45,000 employees, and decrease our budget by one half a billion dollars between now and October. That is not as significant a change as you might think. It will not jeopardize any of the services that we are currently rendering, and may, in fact, even increase our efficiency.

A second general principle is our wish to increase decision-making at the state and local governmental levels—to take the decision-making regarding public health and medical care out of Washington and return it to state and local governments and the private sector.

Our final goal is to increase the role of market forces by increasing the role of the private sector in regulating the practice of medicine and those forces that influence the cost and availability of medicine. In effect, what Dr. Simmons called "the heavy hand of government" will be lightened considerably by decreasing the amount of regulatory activities coming out of Washington and returning the responsibility to the hands of the professionals.

The problems that confront us are multiple. The greatest challenge we as a profession and certainly we in government face is the challenge of quality medical care and its associated costs. During periods of great threat, such as the present economic one, there is a dangerous tendency to cut corners and to shave the edges in order to get by. This is not a problem only of the medical profession, but it touches every profession and every institution. The problems that we face stem from our living well, and well beyond our means, for nearly 30 years. Many of our bills for

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our education, for our medical care, and for our other medical costs have been paid by government, by insurance, by parents, and by someone or something else. We are discovering that it is possible for our society to run out of what we have considered essentials like oil, water, and money. The wealth we have expended has resulted in remarkable achievements in our society, especially in the medical sciences which have blossomed during this period of virtually unlimited spending in medical research, the arts, and the whole realm of social justice. Society was willing to pay the price. We did pay the price, and today, in my opinion, we are just as willing to pay that price; but, unfortunately, we cannot do it. In these circumstances there is a natural instinct to retrench, conserve and, as a result, fail to achieve our best. We are willing to compromise in order to keep going. That is the big danger. New technologies in medicine are very costly. The decision to use them is often not an opportunity but a burden. A tangle of reimbursement systems has turned more than one physician into a bookkeeper. The quality of medical care has become vulnerable as a result. Despite the costs of our system of health care as it currently exists, it still manages to deliver the highest quality of care to the most people of any society in the history of man. The progress we have made in many areas of improved health status is the outcome of our concern for quality. Our primary challenge today is to maintain and enhance this quality, regardless of the circumstances that have controlled costs.

The other challenge that I would like to discuss with you involves the individual practitioner and his role not only as a professional, but also as a citizen. The medical profession has, over the years, contributed many extraordinary men and women who have helped shape our institutions and influence the direction of social change. It is this kind of leadership we especially need today and it is this kind of leadership that we in government are counting on if the proposals that we are making are to succeed. We are putting the responsibility for making decisions back in the hands of the professionals. If the medical profession does not respond to this challenge, then we are doomed not to be successful.

We are now in the process of redressing the balance between the central government, the federal government, and the state and territorial governments. Although it has been an issue for

some time, it is the hallmark of the administration of President Reagan. In early April the President set up an advisory committee on federalism. Its purpose was to help him and the administration "restore a proper constitutional relationship between federal, state and local governments." The President went on to say, "We need to provide for greater authority and responsibility in the states, counties, cities and towns; to return government to those closest to the people most affected." The success of this effort depends on the understanding and sophistication of every citizen in this country, particularly people like you. You have been privileged to learn about community leadership through your professional activities. The reason we need this shift in power and authority goes back to the past 30 or so years.

During that time we saw the human concerns of our citizens engulfed year by year into a large web of government interest. A great variety of health and social programs has been enacted. Reasonable people can debate the value of this or that program and, in fact, disagree with it. But, for the most part, each of these programs sprang from a genuine sense of compassion and a desire for social justice. Nevertheless, these blessings have become a burden. By 1979 there were 492 categorical grant-in-aid programs run by the federal government, designed to improve health, social services, public safety, criminal justice systems, public education, and the environment. Of these 492, 69 categorical grant-in-aid programs were in public health. Most were carried out with the help of state and local health authorities or, at least, with their acquiescence.

It has been necessary to construct an elaborate system to assure an equitable distribution of the funds for these programs, and another system to account for how the money has been ultimately spent. Good people with good educations have been caught in the tangled web of control. At present it is difficult to determine whether such a system, by its very nature, can assure the delivery of quality services to patients, beneficiaries, or clients and, certainly, it is difficult to say whether it can be done efficiently. Such an excess was anticipated nearly 200 years ago and solutions given by Hamilton, Madison and John Jay in the *Federalist Papers*. I will quote from Hamilton in a paper that appeared in the spring of 1788. He said, "It should not be forgotten that a disposition in the State government to encroach

upon the rights of the Union is quite as probable as a disposition in the Union to encroach upon the rights of State governments." Hamilton recognized this state of war but remained hopeful. He ended this particular paper by noting that the solution "must be left to the prudence and firmness of the people who as they will hold the scales in their own hands, it is to be hoped will always take care to preserve the constitutional equilibrium between the general and the State governments."

I think it is fair to say that the piling up of those 492 categorical grant-in-aid programs has represented an encroachment of the federal government upon the states. That the programs were well intended or useful is not the point. What we have witnessed over the years has been the development of a major imbalance between the federal government and the governments of states and territories. We are now trying to redress that. The President is seeking to move the force and the power back towards the states. That means that the responsibility for decisions about many public services will be with the states. Here, in Tennessee, not in Washington, not in the Atlanta Regional Office, the medical community has the opportunity and the responsibility to contribute its experience and wisdom to help state and local authorities make the best decisions for the people of this state.

How is this shift in power scheduled to take place? There are two possible ways. It can be done through the budget process and through new legislation. The President has proposed a budget for this coming fiscal year that attritionally reduces the rate of growth and federal spending. This is sometimes reported in the news media as "across-the-board cuts" which is probably the most common term and perhaps the kindest term that has been used. Let me give two examples of our approach to the fiscal 1982 budget that not only demonstrate the principle of decreased federal spending but also the principle of putting the power back in the hands of the profession and the people. We have decided to phase out the Professional Standards Review Program, the PSRO, by 1983. That is, we are going to phase out the federal funding of it and the requirements that it exists. It is worth a try and it certainly has raised the consciousness of some professionals about the quality of their care. We feel that whether or not a PSRO or some other kind of review program exists should

be a decision made by the medical staff, the hospital, and other organizations at that level, not by the federal government. In fact, as Dr. Simmons has pointed out, the increasing push towards competition will probably lead to some kind of voluntary review program using criteria that are appropriate for that region and for that hospital. Such a program will help determine whether the quality of care has been sufficient and whether the cost has been excessive.

Quality of medical care has to be a paramount concern. But it cannot exist by law or by regulations and it cannot be bought. On the other hand, our national survival—particularly in medicine—depends upon our ability to continue to enlarge our base of scientific knowledge. It is an appropriate role for the federal government to fund that kind of effort. Our proposed budget to support biomedical and behavioral research in fiscal year 1982 will be \$3.98 billion, up from the \$3.77 billion this year. It is one of the major areas in the budget, and the only one in the Public Health Service budget that has received an increase. As you might imagine, the largest portion of those funds will be allocated to the National Institutes of Health and the second largest to the Alcohol, Drug Abuse and Mental Health Administration. The expenditure of such large amounts of tax money requires great attention to planning and to accountability. Both activities take place at the National Institutes of Health with the assistance of nongovernmental advisors, scientists, practitioners, administrators, attorneys and members of the general public. They form the majority in all our efforts to structure a national research strategy. Over the past five years the Public Health Service has evolved a research plan that gives us a sense of priority without being rigid. That gives us direction without being proscriptive. In the context of this national research plan we have been supporting and intend to continue supporting, what Dr. Don Frederickson, the director of NIH, calls the "full continuum of activities" from the most fundamental to the most practical ends of biomedical research.

While there is a clear attempt to strike a balance between work and basic science and the application of research results to the patient at the bedside, there is a second kind of balance that also must be part of our approach to federally funded research. Dr. Frederickson has explained this through the metaphor of temperatures.

"Select growth areas in which scientific opportunity is hot and persist in activities in cold areas in which need of knowledge is still great," he said. Among the "hot" work we would include further work in cell biology, immunology, and in the development of the technique of monoclonal hybridoma which shows great promise for the development of vaccines that, during epidemics, can be responsive to genetic changes in the organism. At the colder end of the spectrum would be persistent activity in such areas as cystic fibrosis, osteoarthritis, and research in the causes of premature birth. The federal research effort is the foundation upon which nearly all of our Public Health activities must rest.

Over the years, the knowledge we have gained through research has led to the declines we are now noting in heart disease and stroke, the decreased incidence of infectious disease in childhood, the decreased mortality rate for certain cancers, and the steady and continuing decline in our infant mortality rate. Everyone in medicine can be proud of these markers of improved health in this country and can understand why, even in times of decreased federal spending, we must maintain and even increase our support for such services. As we worked on the budget and the programs, we looked at each program and asked "Is this an activity that only the federal government can do best or can this be better done by someone else?" For the research activity, the answer clearly was the federal government. Similar judgments were made in other areas. For example, we are phasing out federal support for health maintenance organizations (HMOs), not because we do not believe that they are an alternative method of practicing medicine, but because we believe that they are strong enough now to elicit private sector support without federal involvement.

A similar judgment has been made about health planning. There is no question that health planning is a useful tool for improving the delivery of health services in a region or in a state. Some places have done that well; others have not done it as well. In any case, however, this is an activity best left to the experience and judgment of those citizens most directly affected. Hence, we intend to phase out federal support of health planning over the next few years and have proposed legislation to remove the requirements for certificate of need in the states, effective this year, if the Congress approves it. It would be a

serious misreading of our total plan if every program receiving less or no funding next year was thought to be of no value for the national health enterprise. Our actions should be viewed within the narrower context of the need to reduce federal spending and the need to get the federal government out of those activities that are more effectively managed by other groups in our society.

As an example of providing increased authority to the states, the President has proposed a series of block grants. Two of these involve health. The first is a health service block grant that would consolidate 15 categorical programs including emergency medical services, community health centers, community mental health centers, drug and alcohol abuse programs and so forth, into one program that would be awarded to each state. Total cost of this program, nationwide, is \$1.13 billion for fiscal year 1982. The requirements from the states for these block grants would be minimal. They would be required first to limit all spending from those blocks to one or some combination of the 15 programs included in that block. Second, they would be required to develop a state plan for the expenditure of these funds. Such plans would be made public prior to their implementation. None of these requirements, so far, has involved the federal government. The third aspect demands that the states be required to file with us an expenditure report of the funds expended each year. Finally, they would be required to have a federal audit at least every other year. Therefore, the states will have the responsibility for spending their funds in a way that best meets the needs of their people. Clearly, state governments are going to be dependent upon the profession for appropriate advice and counsel and the appropriate direction to take in the administration of these funds in the development of their programs. If the profession does not respond, and is not participating in those deliberations, then, in fact, the program will not meet its objectives.

The second block grant is called the prevention block. It consolidates ten programs of prevention and preventive services of one kind or another, including family planning, water fluoridation, rat control, lead-base paint control and other such measures with total funding of \$242 million for fiscal year 1982. Immunization programs are currently federally funded within the states as categorical programs. Because of the current push to try to eliminate certain infectious

diseases, it might be of interest to you to know that we are right on target with the goal of eliminating measles among children in this country by 1982. We had gone with less than 100 cases of measles per week in this country for 36 weeks until a week ago. Virtually all of the cases had been imported from other countries. Unfortunately, my home state just burst that balloon by adding an outbreak in south Texas which has spoiled that record. That outbreak is rapidly being controlled, and it does look as though we in this country are about a year away from the eradication of measles from our children. Unfortunately, we have not been able to get the rest of the world to become quite as excited about our efforts with measles, but I am meeting with the Minister of Health for Mexico in about two weeks in an attempt to convince him to develop such a program. We are meeting also with the appropriate health authorities in Canada, the other country that has not yet begun a push in this effort. It is intriguing to think that if this program is successful, during the past 30 years we will have eliminated two of the most common illnesses that affect mankind, smallpox and measles, from the United States and hopefully from the world.

We believe that these block grants and the block grant approach can accomplish several things that have eluded federal and state public health authorities for a long time. First, there is an anomaly with the federal government deeply involved in the local delivery of health services through the community health centers and community mental health centers. The federal government will continue to honor its commitment for health care to veterans and to native Americans and Alaskan natives. We can no longer pretend that the federal government understands local health needs so well that it can make a reasoned judgment as to the allocation of resources to meet those needs. We have proposed that the merchant seamen and other seafarers, who have received free medical care from this country since the 1700s, no longer receive this entitlement and we propose to close the eight Public Health Service hospitals and 27 freestanding clinics that have been serving that population. These people are employed and, therefore, can receive health insurance in other programs. The second anomaly we are trying to correct is that many health services that the federal government has been providing are actually deliv-

ered by grantees or contractors at the local level, very often the state and local health agencies themselves. The money received for this activity has been accounted for under a very complicated and costly system. It is that system that we will do away with. Finally, the present system has rewarded most of those who best understand the rules, who can file proposals more quickly, or a dozen other reasons not related to the health needs of the citizens. We desire the local agencies to develop a plan and implement it. These proposals are now before the Congress. Hearings have been scheduled and will be debated; you will hear about those debates and may, in fact, participate. I would urge you to participate as those debates develop so that the program that will be most effective, from your point of view, is the one that is adopted.

A major thrust of this administration will be efforts towards prevention of illness. Of the ten leading causes of decreased life span, not the ten leading causes of death, but the ten leading causes of premature death, one stands out above all others, and that is violence. Accidents, homicide and suicide, as a group, are one of the leading causes of decreased life span in this nation. Certainly, efforts by the medical profession to prevent these must be developed and must be implemented in the near future. Lifestyle changes, decreased alcohol abuse, stopping of smoking, increased exercise, improved nutrition and other measures of that sort can, in fact, be implemented and can reduce premature deaths in this country. That, it seems to me, is another direction that the profession must take and for which we will attempt to provide leadership.

Finally, in health manpower, our proposals would no longer fund "capacity building" as it is now known. With the single exception of nursing, we will not provide general institutional support, construction support, or other measures that have been aimed at increasing the production of health professionals. We will provide support for nursing in an attempt to be more targeted and more channeled in an attempt to meet the most pressing need for nurses in the country, especially for nurses who care for patients in the hospital, particularly in critical care areas. We will continue, too, to provide funding for primary care residencies, particularly pediatrics and family medicine, in an attempt to allow institutions to develop the necessary strengths in those programs so that they can, eventually,

stand alone.

When proposals are enacted by the Congress we believe that they will materially contribute to reestablishing what Alexander Hamilton called the "constitutional equilibrium." That belief rests on the hope, however, that those persons who are most deeply committed to the delivery of efficient, high quality care — namely, the medical profession — will take part in the decision-making process — where they live and where they work. Each one of us must care genuinely about the future of his profession and of the health care and medical practice in this country and must turn that care into active participation. In my conversations over the past three months

that I have now been in Washington, with physicians, hospital administrators, nurses, trustees, private citizens and all other sorts of people who manage to find their way to my office that I thought was hidden, I have become very optimistic about the next ten years. I know that change is painful and I know that change is frustrating and sometimes discouraging. But, change is, in fact, upon us. Change will occur. And change, in this case, I think, is good. Your job and my job is to try and direct that change; to see to it that we find the best way to deliver efficient, high-quality medical care to the people and not be told by the federal government or by other groups how to do it.

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Endoscopy in Upper GI Bleeding

A National Institutes of Health Consensus Development Conference, held at NIH on August 20-22, 1980, addressed the issues that have arisen over the use of endoscopy in the management of upper gastrointestinal (GI) bleeding. At NIH, consensus development conferences bring together biomedical research scientists, practicing physicians, consumers, and others as needed to provide scientific evaluation of a technology and reach general agreement on the safety and effectiveness of that medical technology. The technology may be a drug, device, or medical or surgical procedure.

A consensus development panel and members of the audience considered evidence presented to answer the following questions:

- What are the benefits of endoscopy in upper GI bleeding?
- What is the place of other diagnostic approaches to upper GI bleeding?
- What are the considerations in the decision as to whether to perform endoscopy?
- What are the risks of endoscopy in the bleeding patient?

This conference was sponsored by the National Institute of Arthritis, Metabolism, and Digestive Diseases, NIH, in conjunction with the National Center for Health Care Technology, and assisted by the Office for Medical Applications of Research.

Members of the Consensus Development Panel were Sherman M. Mellinkoff, M.D. (chairman), University of California at Los Angeles School of Medicine; William R. Best, M.D., University of Illinois Hospital, Chicago; Wilma Diner, M.D., University of Arkansas School for Medical Sciences, Little Rock; Faith Fitzgerald, M.D., University of Michigan, Ann Arbor; James A. Fry, M.D., Western Clinic, Tacoma, Wash.; Thomas R. Hendrix, M.D., The Johns Hopkins University School of Medicine, Baltimore; Benjamin M. Kagan, M.D., Cedars Sinai Medical Center/UCLA, Los Angeles; Louis Lazar, M.D., Millard Fillmore Hospital, Buffalo, NY; Paul Sherlock, M.D., Cornell University Medical College and Memorial Sloan-Kettering Cancer Center, New York; William Silen, M.D., Harvard Medical School and Beth Israel Hospital, Boston. Program coordinator was Harold P. Roth, M.D., National Institute of Arthritis, Metabolism and Digestive Diseases, NIH, Bethesda, Md.

The members of the panel included individuals with many of the disciplinary skills involved in the evaluation and treatment of bleeding in the upper GI tract. After hearing formal presentations and discussion, the panel met to assess the issues based on the evidence heard. The results of the panel's deliberations are presented in the summary which follows.

Introduction

Upper GI bleeding is a common and serious medical problem. It has been estimated that in the United States each year approximately 115 patients per 100,000 population are hospitalized with episodes of upper GI bleeding. These events lead to approximately 250,000 new hospital admissions per year. The mortality from such bleeding, approximately 10%, has not decreased substantially over the past years in spite of improvement in diagnostic accuracy and innovations in therapy.

Upper GI bleeding presents complex problems in management for a number of reasons: (1) It may occur as an unexpected emergency; hence, diagnostic and therapeutic facilities must be proximally located and available on short notice. (2) Clinical signs are imperfect guides to the magnitude of hemorrhage, since they neither signal whether bleeding has stopped, nor indicate what level of cardiovascular reserve remains to compensate for any additional blood loss. (3) Patients may require supportive therapy to maintain functional blood volume and to ensure adequate perfusion of vital organs. (4) Supportive therapy and diagnostic evaluation must proceed simultaneously. (In some patients, therapy for hemorrhage can be definitive, e.g., resection of a bleeding gastric ulcer with antrectomy.)

The first step in the management of upper GI bleeding is evaluation of cardiovascular status, i.e., pulse, blood pressure, orthostatic changes, and other physical signs of hypovolemia (low blood volume). If evidence of hypovolemia is found, volume replacement must be prompt and

adequate. By history and physical examination, clues that will lead to likely diagnostic candidates should be sought, i.e., physical evidence of liver disease, history of ingestion of aspirin or other drugs, ingestion of anticoagulants, history of dyspepsia, or previous bleeding episodes.

On the basis of this initial evaluation, an estimate as to the severity of the bleeding episode should be developed as well as a plan for the diagnostic procedures that are most likely to provide useful information at minimal risk and discomfort to the patient. One of these procedures, upper GI endoscopy, was the subject of this consensus conference.

Upper GI endoscopy was chosen for consideration because it is a rapidly evolving technology. Its use has increased rapidly in recent years. Questions have been expressed as to whether this technique is being used either too frequently or not enough. In addition, it should be asked whether use of the procedure incurs an expense in excess of that associated with more traditional management, and if so, whether this cost is warranted by improvement in coping with the problems in upper GI bleeding.

It is generally agreed that in the presence of acute upper GI bleeding expertly performed endoscopy appears, in most instances, to offer the best available method for identifying the site of the bleeding lesion. The technology may not be applicable when bleeding is so massive that immediate surgery appears to provide the only hope of saving the patient's life. This consideration should not preclude use of endoscopy in the operating room to aid the surgeon in locating the lesion. In addition, if bleeding is so rapid as to reduce greatly the chance of visualizing the esophagus and esophagogastric junction, the technology may not be applicable and the risk of aspiration in these circumstances is significant. Therefore, endoscopy should be delayed until a more appropriate time.

As in all clinical situations, the primary physician caring for the individual patient with upper GI bleeding has an important role in assessing that patient's needs and candidacy for endoscopy. The decision as to what diagnostic or therapeutic steps to take will, of course, be directed mainly by the patient's immediate clinical status, but may often be modified by the immediate availability of various consultants who are expert in certain diagnostic techniques.

The diagnostic accuracy of endoscopy in gastrointestinal bleeding is dependent upon the skill

and experience of the endoscopist and the adequacy of facilities, equipment, and supporting personnel. Individuals with minimal training should be discouraged from performing endoscopy, as lack of experience may lead to diagnostic error, complications, and inappropriate decisions regarding patient care. The best interest of the public, in terms of the quality of care related to endoscopy and its attendant cost, is assured by the application of well-defined professional standards for endoscopy.

Although performing upper GI panendoscopy is difficult in the bleeding patient, the well-trained endoscopist can, in the majority of circumstances, locate the bleeding lesion, and in those cases in which there is more than one potentially bleeding lesion present, identify the one responsible for most of the bleeding.

Before choosing any diagnostic or therapeutic course, the physician must weigh the risks and costs of each procedure against its possible benefits.

What are the benefits of endoscopy in upper GI bleeding?

Precise determination of location and type of lesion may be of singular value to the surgeon operating upon the patient with upper GI hemorrhage. Since the nature and timing of the surgical procedure is dictated to a major extent by the specific lesion being treated, preoperative knowledge of the exact lesion enhances placement of the appropriate incision, increases the rapidity and smoothness with which the procedure can be accomplished, and averts the need for unnecessary intraoperative maneuvers which might increase morbidity and mortality.

One of the major benefits of precise endoscopic diagnosis is avoidance of an inappropriate operation on the patient who is bleeding from esophageal varices, or perhaps on patients with diffuse erosive gastritis.

Although it seems likely that such improvement in precision of diagnosis will reduce mortality and morbidity resulting from surgery, this has not yet been clearly demonstrated. Carefully controlled studies in this area are urgently needed.

Although the advent of fiberoptic endoscopy has improved the precision with which an accurate diagnosis of the source of upper GI hemorrhage can be made, there is, as yet, no clear evidence that mortality is significantly altered by such information. It is possible that this situation

results from our inability to identify specific subsets of patients with upper GI hemorrhage who would benefit from early and specific diagnosis. In addition, definitive and effective therapy for identifiable lesions is not yet fully developed.

Despite a lack of demonstrable improvement in mortality, other somewhat less obvious benefits may derive from specific diagnosis of the bleeding lesion. The physician can avoid the use of potentially harmful techniques, may discontinue ineffective therapies, or may identify a lesion whose course may be affected by therapy. Counseling of the patient or the family of the patient may be more rational, and a better estimate of long-term prognosis may be possible.

Therapeutic endoscopic methods for control of GI bleeding need to be investigated using large-scale clinical trials. There are several possible methods for coagulating bleeding lesions through endoscopy; these have now reached a suitable state of development, so that the method most likely to be readily and safely adoptable for use by the average endoscopist should now be chosen for randomized comparison with conventional therapy. Uncontrolled use of these modalities should be discouraged until the results of such studies are known.

What is the place of other diagnostic approaches to upper GI bleeding?

Contrast Radiography

The single contrast upper GI series has been found in comparison studies to be about one half as accurate as endoscopy in identifying upper GI lesions responsible for bleeding. There is evidence that expertly performed double contrast techniques approach the accuracy of endoscopy. Drawbacks of barium studies include obscuring the field for endoscopy, or angiography; complicating surgery; creating difficulty in obtaining an adequate examination in an uncooperative patient; causing inaccuracy of diagnosis in the presence of retained blood clots or dilution of the barium by large amounts of blood or other material in the stomach; and requiring repeated radiation exposure resulting from the numerous studies frequently used.

Angiography

Angiography is generally not as accurate as endoscopy, and rarely identifies bleeding unless blood loss is 0.5 cc/min or greater. The clearest indication for angiography is a situation in which

intra-arterial therapy is likely to be effective. Drug infusion or embolization may be effective for occlusion of varices and stanching bleeding from other lesions.

Radionuclide Scanning

Radionuclide scanning with technetium sulfurcolloid or tagged red blood cells is a promising noninvasive screening technique for the localization of GI bleeding; this requires further evaluation. So far, the use of this method has not been as well demonstrated in patients with upper GI bleeding as it has been in subjects with lower tract bleeding.

What are the considerations in the decision whether to perform endoscopy?

It is important for the physician to assess all relevant clinical factors, including the severity of the hemorrhage, to determine benefits to be expected from having a precise diagnosis for the origin of the bleeding. The utility of this diagnostic information should be weighed against the potential risks of performing endoscopy. While endoscopy is usually the best procedure for identifying the bleeding lesion, it need not automatically be performed in all instances of upper GI bleeding, nor is it required following each episode of repeated bleeding in an individual patient. Differences in the expertise of the locally available specialists in endoscopy and radiography should also be considered in choosing the diagnostic approach. An uncooperative patient is a poor candidate not only for endoscopy but also for most other diagnostic procedures.

There are clinical settings in which bleeding is minor and apparently self-limited, and in which careful prolonged observation is the best course to follow.

Continuous or recurrent bleeding during hospitalization in the absence of a clear-cut diagnosis is usually a relatively strong indication for endoscopy if it has not already been done. Such rebleeding in a patient previously endoscoped but without firm diagnosis should be cause to consider repeating endoscopy.

Endoscopy may be indicated when there is doubt as to the preferred medical or surgical therapy and when improved diagnostic information would be expected to clarify this issue. For example, in patients known to have cirrhosis of the liver with esophageal varices, bleeding episodes are often related to factors other than the varices, such as peptic ulcers or erosive gastritis.

It is important to ascertain the exact cause of bleeding, since the therapeutic approach to bleeding varices is completely different from that used to treat other causes of bleeding.

It is very important to identify bleeding from esophageal varices related to extrahepatic portal hypertension, since the beneficial effects of decompressive surgery are so much more definitive and long-lasting than they are in hepatic cirrhosis. Unexplained upper GI bleeding in the presence of splenomegaly or other physical findings suggesting portal hypertension would prompt a search for varices.

What are the risks of endoscopy in the bleeding patient?

Although complications are generally rare, they are more common in patients with actual or potential heart, lung, renal, and liver diseases and in patients on immunosuppressive regimens. Patients with any of those conditions must be carefully evaluated beforehand and observed during the endoscopic procedure for hypoxemia, arrhythmia, hypotension, or other untoward events. Resuscitation facilities must be in place where the procedure is performed.

Complications from endoscopy in gastrointestinal hemorrhage when done in an emergency are increased over those to be expected when the procedure is done electively. Aspiration is more common and more serious when endoscopy is performed in the presence of active upper GI bleeding. The most common complications of endoscopy, regardless of the indication for its use, are cardiopulmonary and result from the procedure itself or from premedication. Thrombophlebitis may occur following intravenous medication. Perforations, although rare, occur particularly in the proximal esophagus in the area of the cricopharyngeus. Perforations also occur through Zenker's diverticula and through areas of tumor during or following endoscopic manipu-

lation. Cervical spondylosis sometimes makes endoscopy difficult. Other complications include aggravated bleeding, particularly if a biopsy is performed, and sepsis.

The transmission of infection by endoscopy is extremely rare and is avoidable by appropriate mechanical cleansing and disinfection.

Prospectus

Endoscopy is an excellent tool for the differential diagnosis of upper GI bleeding. The lack of demonstrated effect on overall mortality, however, strongly suggests that the major current task is to use the diagnostic information gleaned by endoscopy as a stimulus for further vigorous investigations of different and newer therapies for the different lesions causing upper GI bleeding.

There is need for a standardized coding system for diagnosis and services rendered so that adequate data for planning resource commitment to the problem of gastrointestinal hemorrhage can be made on a rational basis. Physicians should specify upper GI bleeding as the reason for hospitalization, if that be the case, in addition to any other indicated diagnoses.

Financial Implications

In spite of the increased diagnostic accuracy of endoscopy, its high cost is an impediment to abandoning conventional investigation of upper GI hemorrhage with contrast radiography in acute upper GI hemorrhage. This is especially true since the increased diagnostic information obtained from endoscopy has not resulted in definitively improving mortality.

Minority Statement

A minority of the panel favored inclusion of a statement in this report to the effect that fees for GI endoscopy are not infrequently greater than seems reasonable in comparison with other medical fees.

Marijuana in the '80s

It is perhaps ironic that concomitant with emerging therapeutic possibilities for cannabis and its constituents, new evidence has appeared that marijuana is hazardous to health.

On the one hand, we are at the threshold of providing symptomatic relief to some patients who suffer extreme nausea from cancer chemotherapy and for whom existing antiemetic agents are ineffective. On the other hand, we face the growing prospect of an appreciable number of marijuana users incurring physiological and psychological impairment.

Marijuana is the drug of the young. More than two thirds of 18- to 25-year-old persons in the United States have tried it on at least one occasion.¹ Some have been chronic users. For the children, adolescents and young adults who do smoke marijuana regularly there is considerable risk ahead. The risk for them, and for society, is of a nature and magnitude that belies the characterization of marijuana as a "soft drug." It can be hard on its user, and inflict a great deal of harm.

The Council on Scientific Affairs has on two previous occasions called attention to the health aspects of marijuana use. In a report adopted by the House of Delegates in December 1977 (Report D, I-77), the Council expressed concern over evidence of a range of adverse effects that had been appearing in the scientific literature.² Two years later, in December 1979 (Report I, I-79), the Council reaffirmed its concern to the House, and emphasized in particular the dangers of pulmonary involvement and possible carcinogenesis.³ The Council also took cognizance of investigations into possible medical applications of marijuana, and urged that research be more rigorously designed and conducted in the future.

In adopting the second Council report, the House asked the Council to prepare a subsequent report on "(1) increased regular use of marijuana by youth, (2) the proliferation of the parapher-

nalia industry and so-called head shops, and (3) the subverting of FDA laws and regulations by state laws that legalize marijuana use for medical purposes."

Then, in July 1980, the House referred to the Council Resolution 3, introduced by the Wisconsin delegation, proposing that, in view of growing evidence of health hazards, the AMA "officially declare marijuana to be a dangerous drug."

This report, which constitutes a response to these requests, comes in the wake of three documents released earlier this year by the National Institute on Drug Abuse (NIDA): *Marijuana and Health: 1980*,⁴ HEW's eighth annual report to Congress; *A Drug Retrospect: 1962 to 1980*⁵; and *The National Survey on Drug Abuse: 1979*.¹ Taken together, these publications paint a disquieting picture of a growing proportion of young people exposing themselves to dangers that no longer are in the area of tenuous speculation.

Use of Marijuana by Youth

NIDA's latest national survey reflected significant changes in marijuana usage from 1971 to 1979.¹

In 1971, one of ten adolescents aged 14 and 15 reported ever using the drug. By 1979, the rate for this age group had tripled, climbing to 32%. In the same period lifetime prevalence for 16- and 17-year-olds had risen from 27% to 51%.

Looking at the 12- to 17-year-olds who said in 1979 that they smoked marijuana on a fairly regular basis, the survey showed that 8.4% reported using the drug on five or more days during the previous month. Over 22% of young adults (18 to 25 years old) reported this frequency of usage. These figures, based as they are on a survey of households, undoubtedly are conservative; it can be assumed that a sizable number of chronic users detach themselves from family settings, and that students living away from home—who were not interviewed—might include a proportionately larger number of regular users than the

¹This is Council on Scientific Affairs Report B. Past House Action: A-80:212; I-79:178-181; I-77:188-193.

surveyed population.

Although the NIDA survey indicated that only 8% of 12- and 13-year-old children in 1979 had ever tried marijuana, this figure is a third larger than the percentage of children of that age in 1971 who said they had ever used it. Moreover, other surveys conducted in two states found a greater proportion of children than this who used marijuana. In 1978, one in five 8th graders questioned in Maryland said they were currently smoking marijuana, and one in 11 said they were doing so daily or several times a week.⁶ In Maine the same year, 56% of 13- to 15-year-olds who were sampled said they had used the drug at least once, and 42% reported being regular users.⁷

As pointed out in the two previous Council reports on marijuana, regular use can constitute a hazard for anyone; especially vulnerable, however, are children and adolescents, who are in crucial phases of psychological and physiological development. Additional findings of adverse effects of marijuana use in animals and humans, coupled with evidence of substantial regular use by young people, therefore have serious implications for the health of a new generation.

Some of the major recent findings as summarized in the 1980 Marijuana and Health report⁴ that have particular relevance to youth can be grouped under the headings of brain function, psychomotor effects, reproductive function, pulmonary involvement, and psychopathology.

It should be emphasized that most deleterious effects are related to chronic or consistent, as opposed to episodic, use of marijuana. Metabolites of delta-9-tetrahydrocannabinol (THC) can be found in fatty tissue for up to eight days following intake, so that a cumulative build-up takes place with regular use. (THC is the most prominent psychoactive component of marijuana.) The quality of the marijuana is also significant; in this regard, it is noteworthy that cannabis preparations in use today are as much as five times as potent in THC content as those available five years ago.

Brain Function

Conclusive evidence of macroscopic brain damage is lacking. Microscopic cellular changes, however, have been found in brains of rhesus monkeys who received the equivalent of one marijuana cigarette daily for six months.⁸ Similar measurements have not been made in humans.

Yet, the possibility that such changes, which

may or may not be reversible, can take place in man as well as in another primate cannot be dismissed out of hand. Moreover, damage does not necessarily have to be visible to result in impaired mental functioning.

In that regard, there are abundant anecdotal reports, if not controlled studies, on the lack of academic drive on the part of students who regularly use high doses of marijuana. Long-term sedative and other effects from chronic intake may combine with acute intoxication effects to initiate or to reinforce inattention to schoolwork or the wish to drop out.

The NIDA report⁴ alludes to "dozens of experimental studies" which consistently have shown adverse acute effects of marijuana use on cognition and immediate memory; so that for "substantial numbers of high school students (who) are using marijuana during the course of the school day . . . a detrimental effect on their classroom functioning and knowledge acquisition" is likely.

Psychomotor Effects

The Council in its 1977 report on marijuana singled out motor vehicle crashes as potentially the most serious consequence of psychomotor impairment resulting from acute intoxication. Subsequent studies have indicated that as many as eight of ten marijuana users sometimes drive when they are "high."⁴ NIDA predicts that "as use becomes increasingly common and socially acceptable and as the risk of arrest for simple possession decreases, more users are likely to risk driving while high."⁴

A recent study in California, involving blood samples of 1,800 motorists arrested for driving while intoxicated, detected marijuana in 16% of the cases, nearly all of them in conjunction with the presence of alcohol.⁹

The concomitant use of marijuana and alcohol, which is quite common, has its greatest implications in the area of highway safety. Reduction in reaction time, poor cognition and impaired coordination that have been observed with the use of either substance alone are markedly amplified when the two drugs are taken in combination.¹⁰

Reproductive Function

Possible disturbances in endocrine function of adolescents and young adults are of greatest interest insofar as they adversely affect sexuality and reproduction. In 1977, the evidence for such

effects was sparse. Now, although inconclusive and often preliminary, there is a growing body of data from studies of chronic heavy use in animals and humans that point to diminished fertility and that substantiate danger to the fetus.

For males, there is conflicting evidence regarding the lowering of testosterone levels, especially as to whether such effects are long-term and attendant upon chronic use, or transitory as a result of acute administration. In either case, interesting research questions can be raised concerning aphrodisiac qualities of marijuana that have been alleged by some users. Reduced sperm counts, which were found in one controlled study, probably are not as significant for decreased fertility as are abnormalities in structure and impaired motility, also detected in sperm in this study.¹¹

For females, chronic marijuana use may cause abnormal menstruation, including failure to ovulate, and fetal damage. Menstrual problems were evident in a controlled study of street users in St. Louis,¹² although concomitant use of alcohol by some of the subjects could have had some influence on the results. Experiments with rhesus monkeys have implicated THC as a disruptive influence on the reproductive system, with effects apparently mediated through inhibition of pituitary gonadotropin secretion, and also possibly through direct action on reproductive tissues.¹³ In another study, female monkeys treated with THC over a period of three to five years at levels comparable to daily human consumption of one or two marijuana cigarettes, suffered four times the incidence of fetal deaths, abortions and resorptions as did drug-free controls.¹⁴ Although demonstrable fetal effects have been largely embryocidal, the possibility of abnormal fetal development as a result of the mother smoking marijuana during pregnancy cannot be ruled out.

Pulmonary Involvement

The two previous Council reports cited evidence of bronchial impairment and lung damage, including carcinogenic risks, associated with chronic and heavy marijuana smoking, and with combined marijuana and tobacco use. Additional supporting data come from a study done with rats who inhaled marijuana smoke daily for a period of one eighth to one half their life spans and suffered degenerative changes in their lungs more severe than those caused by cigarette tobacco.¹⁵

Although the degree of comparability of

marijuana and tobacco smoke in pulmonary effects is still debatable, one study of bronchoconstriction found that smoking less than one marijuana cigarette per day diminished vital capacity of the lungs as much as smoking 16 tobacco cigarettes.¹⁶ Because smoking several marijuana "joints" daily is not unusual among young people, their risk of incurring pulmonary problems may be far greater than that of heavy users of tobacco. The combination of tobacco and marijuana smoking, a common practice, is probably additive in its pulmonary side effects.

The 1979 Council report also dealt with the issue of spraying marijuana crops with paraquat, a herbicide found to have possible toxic pulmonary effects, although no evidence of paraquat toxicity in humans from smoked marijuana has been noted. This spraying reportedly has been discontinued; nevertheless, it would be advisable, in any future consideration of applying herbicides to marijuana plants, to determine and evaluate the health hazards of the chemicals involved before actually putting them into use.

Psychopathology

It has been known for some time that marijuana use can produce panic reactions, flashbacks and other emotional disturbances, and that children and adolescents are at high risk psychiatrically when they abuse psychoactive substances.

It is now also clear that persons with a history of schizophrenia or other major mental disorders place themselves in jeopardy by using marijuana, because even acute use has been shown to precipitate psychiatric symptoms in such individuals.¹⁷

The fact that the marijuana being smoked today is far more potent than that used just a few years ago may bring an increasing number of psychiatric casualties into emergency rooms, crisis centers, and physicians' offices.

Implications of the Research

Marijuana is a dangerous drug. A growing body of evidence from both animal and human studies and from clinical observations attests to its deleterious effects on behavior, performance, and functioning of various organ systems. There undoubtedly must be improvement in research design and techniques before definitive incontrovertible data can be secured in certain areas. But that is no reason to hesitate in calling attention to the potentialities for harm as they become

clearer and more widespread.

In view of the evidence of possible adverse effects of marijuana use, the sale of, or other trafficking in, marijuana should be subject to stringent penalties and vigorous prosecution.

The AMA has long opposed excessive and unrealistic penalties for possession of small amounts of this drug for personal use. Nevertheless, legislative action that is designed to moderate penalties for possession should be of such a nature as to discourage use and not to support misconceptions that marijuana is a harmless substance. The fact that marijuana may prove to have therapeutic value in medical practice does not indicate that it is a safe drug for recreational use. Legislators should keep in mind the primary need to give young people a clear message that marijuana use may be hazardous and is not sanctioned or endorsed by society. *Fines, although more appropriate penalties than prison sentences when applied to possession for personal use, should be large enough to constitute a deterrent to use.* To reiterate, although all penalties relating to marijuana should be large enough to constitute a deterrent to use, there should be a significantly greater penalty for trafficking in the drug.

The Drug Paraphernalia Industry

Proliferation of Paraphernalia Shops

Retail establishments that specialize in drug-related products have spawned across the country. There are in excess of 15,000 so-called head shops plus an undetermined number of other stores that stock paraphernalia of various kinds.¹⁸ Displayed and sold are machines and paper to roll marijuana cigarettes, pipes and other implements for alternative ways of smoking, and containers for concealing stashes of bulk quantities. Marijuana users are not the only ones catered to. Kits are available for converting cocaine into "free base" which can be smoked, with effects far more devastating than sniffing or inhaling can produce. Measuring devices, scales, instructions, recipes—all pertaining to a variety of psychoactive substances—are there to be examined and purchased.

As much harm as these establishments do in facilitating the abuse of marijuana and other drugs, their chief danger lies in the fact that they often constitute centers for exchange of drug information and for initiating minors into the drug culture.

Pressures brought by parents' organizations and other concerned groups and individuals against such establishments in their communities can be helpful and should be encouraged. Such pressure without legal sanction, however, is not likely to have major impact upon this multi-million dollar industry. Voluntary efforts are probably most successful in limited cases where the supplier or seller unwittingly offers a product that is used adjunctively in drug abuse, and can then be persuaded to withdraw it from the market or curtail its distribution when this fact is called to his attention.

Federal control of this problem would be difficult. The manpower required to enforce national legislation against the marketing of these products would be considerable and might be an undesirable drain on the staffing of other more productive efforts to curb drug abuse.

State and local legislation, on the other hand, has been effective in some parts of the country. The Drug Enforcement Administration (DEA) has prepared a model act for states¹⁹ that sets forth explicit definitions of paraphernalia, and that makes it a crime to possess such devices with intent to use them for drug abuse purpose, or to make or sell such articles with the knowledge that they are to be so used.

Therapeutic Applications

The most promising potential clinical use of marijuana and THC is in the treatment of extreme nausea for patients who undergo cancer chemotherapy.

Well-designed clinical studies have demonstrated the superiority of THC over placebo in this regard.²⁰⁻²² There is conflicting evidence, however, as to the comparative efficacy of THC and prochlorperazine (Compazine), a standard antiemetic drug. For example, one large study found that THC had "no advantage over prochlorperazine,"²² while another evidenced relatively good response to THC, especially among younger subjects.²³ Both of these studies utilized 10-mg doses of prochlorperazine, an amount that is at the low end of the recommended therapeutic range of emesis.²⁴ A majority of 53 patients who were refractory to "aggressive use of standard antiemetics" and who were later given THC showed improvement, in another study:²⁵ Ten had no nausea or vomiting, and 28 had partial responses. It may well be that THC's usefulness as an antiemetic will be greatest among "treatment failures." A large-scale clinical trial of

THC with such patients is being conducted under the auspices of the National Cancer Institute.

In this and future studies, it is hoped that differentials in response to THC and in experiencing adverse reactions can be further elucidated. Older patients, for example, seem to respond less well than younger ones, and to complain more about unpleasant drug-induced effects, such as drowsiness, hallucinations, anxiety and tachycardia.²⁶ More tests also need to be carried out on the relative efficacy of marijuana cigarettes vs. THC capsules as an antiemetic agent. It may be difficult to standardize the content and potency of marijuana in cigarette form, but some patients find they are unable to swallow THC capsules because of retching and vomiting.

Reduction of intraocular pressure in glaucoma is another possible medical use of THC and marijuana that is now being investigated. The comparatively few clinical trials for this indication have yielded encouraging results: additional investigations need to be carried out to uncover any adverse effects and to identify the most active ingredient for this purpose, which may not be delta-9 THC.²⁷

The remaining potential therapeutic uses of marijuana are in preliminary stages of research. A few reports of effectiveness of THC in the treatment of muscle spasticity should prompt further investigation and attempts at replication.²⁷ Much of the clinical applicability of future studies, however, may depend on isolating and determining the action of marijuana's numerous constituents. The cannabis plant contains more than 400 chemicals, including some 60 cannabinoids, and delta-9 THC alone has over 30 metabolites.

Medical use of marijuana and THC, primarily for emesis and glaucoma, is now authorized in more than 20 states, under statutes providing for varying degrees and kinds of research controls. At least 11 of these states have FDA-approved protocols allowing for physician participation in clinical trials. Other states have submitted protocols for approval. Where such protocols are well designed and followed, there is opportunity for obtaining reliable patient data from numerous sources to augment findings that have been derived from small individual controlled studies.

For those states with enabling legislation that has not as yet been implemented, it is recommended that appropriate regulations and guidelines be established to ensure that bona fide research is carried out, and that medical use

beyond the context of clinical investigation is not permitted. For those states that may contemplate legislation in the future, the following features proposed by the FDA²⁸ should be considered for incorporation in statutes:

1. The law should not be in conflict with rules and regulations imposed by current federal laws, such as the Controlled Substances Act.
2. The law should require coordination with FDA, NIDA, DEA and other relevant federal agencies.
3. It should provide adequate funding for the research.
4. It should recognize abuse potential and provide mechanisms to prevent diversion and misuse during the course of the research.

Conclusion

The perils and promise of marijuana require the continuing attention of the medical profession and the scientific community. The unfolding details of the hazards of abuse and the prospects for therapeutic use must be carefully evaluated and interpreted.

As the body of reliable information grows, all segments of society, and young people and their parents in particular, need to be apprised of the facts and their implications. The AMA, state and county medical societies, specialty societies and individual physicians should take a leading role in such educational activities. Physicians themselves should become fully informed, and continuing medical education programs and courses should be developed and made available for this purpose.

As important as prevention of drug abuse is, its victims must not be forgotten. Psychological impairment and physical disorders caused by excessive acute or chronic use of marijuana or other psychoactive drugs, and drug dependence itself, are of major concern to the practicing physician. Working cooperatively with other health professionals and social service personnel, he can provide effective comprehensive treatment and, by so doing, reduce the prevalence of drug problems in the future.

REFERENCES

1. *National Survey on Drug Abuse: 1979*. Rockville, Md. NIDA, June 1980.
2. Health aspects of marijuana use, *Proceedings, AMA House of Delegates*. Chicago, AMA Council on Scientific Affairs, Dec 1977.

(Continued on page 662)

Hyperlipoproteinemia in Diabetes

Alan L. Graber, M.D. (endocrinologist, St. Thomas Hospital): The patient is a 37-year-old woman, a retired Bell Telephone operator, who was discovered at age 20 to have diabetes. She began insulin then, and currently is taking 80 units of Lente insulin daily before supper. She was told she had milky serum when she retired from work about four years ago; she had a cholecystectomy in 1965 for gallstones. She had a hysterectomy and bilateral oophorectomy in August 1978, for which she has taken Premarin, 1.25 mg daily, and has had hypertension for several years for which she takes Oreticyl Forte four times daily (hydrochlorothiazide and deserpidine).

Her mother had late-onset diabetes, with a heart attack at age 62. Her father died at age 61, and her brother, age 48, has borderline diabetes. He is not on insulin or oral hypoglycemic treatment. She has four sisters, apparently without evidence of hyperlipidemia or diabetes. Her brother and a sister had normal fasting triglyceride and cholesterol during her evaluation.

The patient was a slightly overweight woman weighing 131 lb. Her height is 5 ft 2 in with shoes, and blood pressure 158/80 mm Hg. No xanthelasma or tendon or skin xanthomata were seen. The fundi showed silver-wired arterioles without evidence of lipemia retinalis. There was nothing to suggest hypothyroidism or Cushing's syndrome. The abdomen showed well-healed cholecystectomy and hysterectomy scars. There was no splenomegaly, hepatomegaly, or other masses.

A fasting lipid profile showed triglycerides 11,320 mg/dl, cholesterol 1,269 mg/dl, and fasting plasma glucose 266 mg/dl. The serum was described as creamy, almost custard-like. Lipoprotein electrophoresis showed the largest band to be in the pre-beta region, suggesting excessive

very low-density lipoproteins (VLDL). The glycosylated hemoglobin was 17.9%. Thyroid profile, BUN, and other routine laboratory tests were normal.

The patient was hospitalized and treated with a protein-sparing-modified fast with 1.2 gm high biologic value protein per kilogram of ideal body weight.¹ She was discharged on a daily dose of 30 units Lente insulin and 2 gm of clofibrate (Atromid-S). Two weeks later she had lost 8 lb, her weight was 121, she felt well, her triglyceride level had fallen to 100 mg/dl, and her cholesterol value was 139 mg/dl. Fruits and vegetables were added to her diet, and the insulin dose was reduced to 20 units Lente. A month later, the fasting plasma glucose was 174 mg/dl, the triglycerides were 131 mg/dl, and the cholesterol was 212 mg/dl.

Oscar B. Crofford, M.D. (director, Vanderbilt Diabetes Research and Training Center): Is this patient really an insulin-dependent diabetic?

Dr. Graber: We don't know. Since she developed diabetes at age 20, we have assumed she was, but we didn't stop insulin and see if ketosis occurred.

Dr. Crofford: It's important to determine if she is insulin-deficient, or insulin-resistant, since insulin deficiency implies that there is a deficient removal mechanism for triglyceride-rich lipoproteins, and insulin resistance, with accompanying hyperinsulinemia, would indicate an overproduction of VLDL.

Dr. Graber: In the past ten years there have been advances in understanding the physiology of normal lipoprotein transport and pathophysiology of lipoprotein disorders.² Most of the interest in this field stems from the association of increased plasma cholesterol and triglyceride levels with premature atherosclerosis of the coronary and peripheral vasculature. Lipoproteins appear to function as a transport mechanism for nonpolar lipids, and the lipoprotein macromolecule allows the lipids to be soluble in plasma. The lipoprotein core is composed mostly of triglyceride and is surrounded by a

The Diabetes Clinical Care Conference at St. Thomas Hospital, Nashville, Tenn., a collaborative educational program of the St. Thomas Department of Hospital Education and the Vanderbilt Diabetes Research and Training Center, is edited by Alan L. Graber, M.D.

membrane composed of specific proteins (called apoprotein) and more polar lipids such as unesterified cholesterol and phospholipid.

Excess calories eaten with meals are transported mainly as triglyceride and stored in adipose tissue. Triglyceride-rich lipoproteins can enter the plasma either as chylomicrons, derived from dietary fat from the gut, or as VLDL which are endogenously synthesized in the liver from glycerol and circulating free fatty acids. As triglyceride is removed from these lipoproteins, there is progressive decrease in size and increase in density, resulting in the formation of the low-density, cholesterol-rich lipoprotein (LDL). An additional lipoprotein (HDL) plays a role in transport of cholesterol and other membrane components from cells to liver, and may exert a protective role in development of atherosclerosis.

Lipoprotein classification techniques are based on density by ultracentrifugation or by electrophoretic techniques with separation into distinct lipoprotein classes. This classification may be an oversimplification, since there seems to be a continuous spectrum of particle sizes, and most of the common pathophysiologic abnormalities leading to hyperlipoproteinemia can be understood by explaining the regulation of triglyceride-rich lipoprotein input, lipoprotein lipase-mediated triglyceride catabolism, and cholesterol-rich lipoprotein catabolism.

Triglyceride-rich lipoproteins consist of chylomicrons and endogenous VLDL. In normal individuals most triglyceride entering the plasma is derived from dietary triglycerides (about 40% of daily calories). Since in both normal and hypertriglyceridemic individuals there is an increase in plasma triglyceride following each meal, plasma triglyceride levels should be determined only after an overnight fast. In contrast, there is little increase in plasma cholesterol after eating, since most of the plasma cholesterol exists in the low-density and high-density lipoproteins.

Triglyceride synthesized in the liver is regulated by changes in insulin and glucagon levels and is secreted into the hepatic venous outflow as triglyceride-rich VLDL. Hyperinsulinemia due to insulin-resistant states such as obesity, estrogen therapy, and glucocorticoid therapy are associated with increased VLDL production. Alcohol can lead to increased VLDL synthesis and hypertriglyceridemia in some individuals. Finally, a familial disorder, familial hypertri-

glyceridemia, is due to increased VLDL production.³

Triglyceride in plasma in chylomicrons and VLDL is transported to adipose tissue, where triglyceride uptake is catalyzed by the insulin-sensitive enzyme lipoprotein lipase. Insulin deficiency is associated with a decrease in lipoprotein lipase, accounting for most of the elevation of triglyceride-rich lipoprotein in untreated diabetes. After treatment with insulin, residual elevation of plasma triglyceride often occurring in the diabetic may be due to recurrent uncontrolled diabetes, the common association of obesity with diabetes with resultant overproduction of VLDL (as in the patient presented today), the occurrence of azotemia or nephrotic syndrome, or coexistence of a familial form of hypertriglyceridemia. Decreased adipose tissue lipoprotein lipase may also be due to hypothyroidism, renal failure, or a rare autosomal recessive inherited form.

After removal of triglyceride from triglyceride-rich lipoprotein, a remnant lipoprotein is formed, which in turn is converted into the cholesterol-rich LDL. LDL is removed from plasma by extrahepatic tissues, where it is recognized by a specific receptor site on cell surfaces. Increased LDL levels occur in genetic abnormalities with reduction of LDL receptors (familial hypercholesterolemia), or in familial combined hyperlipidemia. In this common autosomal dominant syndrome, approximately one third of the affected relatives have an increase in VLDL alone, one third in LDL alone, and one third in both VLDL and LDL.⁴ The search for this disorder accounted for screening the brother and sister of today's patient.

Ms. Nancy Rogers (Clinical Laboratory director, Vanderbilt Diabetes Research and Training Center): Is clofibrate necessary, or would the diet and weight loss account for her improvement?

Dr. Graber: If this had been a research experiment, we would have instituted diet and documented its effect; then, while keeping the diet constant, we would have started drug treatment with clofibrate and documented its separate effect. From a clinical point of view, we were interested in decreasing these very high lipid levels as rapidly as possible. Perhaps we could answer the question in the future by withdrawing clofibrate while she remains on diet.

Dr. Crofford: I regard these exceedingly high triglyceride levels as somewhat of a medical emergency, since in this situation there is signifi-

cant risk of acute hemorrhagic pancreatitis, which may be fatal. There is probably little risk if the triglyceride level is less than 2,000 mg/dl, but levels this high should be reduced promptly. Even if lipid measurements were not available in the laboratory, a physician practicing under primitive conditions could achieve a significant reduction by removing fat totally from the diet and just providing fluids and electrolytes; he could measure the effect grossly by just spinning the blood in a Wintrobe hematocrit tube and observing the "lipocrit" at the top of the specimen. The very light triglyceride-rich chylomicrons would be visible as a creamy layer at the top.

If pancreatitis occurs and the patient has hypertriglyceridemia, it is difficult to know which came first, the pancreatitis or the hyperlipemia, since hyperlipemia can cause pancreatitis, and pancreatitis sometimes causes hyperlipemia. In this patient we would know that the high lipid levels were the etiology.

A nurse: How does the patient eat differently now?

Patient: I don't eat sweets, and I trim all the fat from meats and eat only the leanest cuts. I cut all the skin off chicken. I've lost 15 lb and would like to resume a more normal diabetic diet.

Ms. Nedra Christensen, R.D. (dietician, Vanderbilt Diabetes Research and Training Center): The technique of food preparation and cooking can really make a difference in the amount of fat actually ingested.

Dr. Crofford: That can be quite important, as the same lipoprotein removal mechanism (lipoprotein lipase) is used by both chylomicrons (dietary fat) and VLDL. If the removal mechanism is saturated by excess VLDL, then the influx of dietary fat can greatly worsen the condition.

Dr. Graber: In summary, disorders of lipoproteins occur in about one third of all diabetic patients. Many of these disorders are related to abnormalities in the availability and effect of insulin. The roles of obesity and diet have also been emphasized.

REFERENCES

1. Graber AL (ed): Use of protein-sparing-modified fast in treatment of diabetes and obesity, Diabetes Clinical Care Conference. *J Tenn Med Assoc* 76:682-698, 1979.
2. Brunzell JD, Chait A, Bierman EL: Pathophysiology of lipoprotein transport. *Metabolism* 27:1109-1127, 1978.
3. Brunzell JD, Bierman EL: Plasma triglyceride and insulin levels in familial hypertriglyceridemia. *Ann Intern Med* 87:198-199, 1977.
4. Goldstein JL, Schrott HG, Hazzard WR: Hyperlipidemia in coronary heart disease. II. Genetic analysis of lipid levels in 176 families and delineation of a new inherited disorder, combined hyperlipidemia. *J Clin Invest* 52:1544-1568, 1973.
5. Marijuana reexamined: Pulmonary risks and therapeutic potentials. *Proceedings, AMA House of Delegates*. Chicago, AMA Council on Scientific Affairs, Dec 1979.
6. *Marijuana and Health: Eighth Annual Report to the U.S. Congress from the Secretary of HEW, 1980*. Rockville, Md, NIDA, 1980.
7. *A Drug Retrospect: 1962 to 1980*. Rockville, Md, NIDA, 1980.
8. *1978 Survey of Drug Abuse Among Adolescents — General Report*. Baltimore, Maryland Dept. of Health and Mental Hygiene—Drug Abuse Admin., March 23, 1979.
9. *An Evaluation of the Decriminalization of Marijuana in Maine*. Office of Alcoholism and Drug Abuse Prevention, 1979.
10. Heath RG, et al: Chronic marihuana smoking: Its effect on function and structure of the primate brain, in Nahas GG, Paton WDM (eds): *Marihuana: Biological Effects*. New York, Pergamon Press, 1979, pp 713-730.
11. Reeve VC: *Incidence of Marijuana in a California Impaired Driver Population*. Sacramento, California Dept. of Justice, Division of Law Enforcement, Investigative Services Branch, 1979.
12. Belgrave BE, et al: The effect of (-) trans-delta-9-tetrahydrocannabinol, alone and in combination with ethanol, on human performance. *Psychopharmacology* 62:53-60, 1979.
13. Hembree WC, Nahas GG, Huang HFS: Changes in human spermatozoa associated with high dose marihuana smoking, in Nahas GG, Paton WDM (eds): *Marihuana: Biological Effects*. New York, Pergamon Press, 1979, pp 429-439.
14. Bauman JE, et al: Endocrine effects of human female chronic marihuana use (in press).
15. Smith CG, Besch NF, Asch RH: Effects of marihuana on the reproductive system, in Thomas JA, Singhal RL (eds): *Advances in Sex Hormone Research*. Baltimore-Munich, Urban and Schwarzenberg, 1980.
16. Sassenrath EN, Chapman LF, Goo GP: Reproduction in rhesus monkeys chronically exposed to delta-9-THC, in Nahas GG, Paton WDM (eds): *Marihuana's Biological Effects*. New York, Pergamon Press, 1979, pp 501-512.
17. Rosenkrantz H, Fleischman RW: Effects of cannabis on lungs, in Nahas GG, Paton WDM (eds): *Marihuana: Biological Effects*. New York, Pergamon Press, 1979, pp 279-300.
18. Tashkin DP, Calvarese B, Simmons M: Respiratory status of 75 chronic marihuana smokers. *Amer Rev Respir Dis* 117:261, 1978.
19. Treffert DA: Marihuana use in schizophrenia: A clear hazard. *Amer J Psych* 135:10, 1978.
20. Wynne RD, et al: *Community and Legal Responses to Drug Paraphernalia*. Rockville, Md, NIDA Services Research Report, 1980.
21. *Model Drug Paraphernalia Act*. Washington, DC, U.S. Dept. of Justice, DEA, 1979.
22. Sallan SE, Zinberg NE, Frei E III: Antiemetic effect of delta-9-tetrahydrocannabinol in patients receiving cancer chemotherapy. *N Engl J Med* 293:795-797, 1975.
23. Chang AE, et al: Delta-9-tetrahydrocannabinol as an antiemetic in cancer patients receiving high-dose methotrexate. *Ann Intern Med* 91:819-824, 1979.
24. Frytak S, et al: Delta-9-tetrahydrocannabinol as an antiemetic for patients receiving cancer chemotherapy. *Ann Intern Med* 91:825-830, 1979.
25. Sallan SE, et al: Antiemetics in patients receiving chemotherapy for cancer. *N Engl J Med* 302:135-138, 1980.
26. *AMA Drug Evaluation*, ed 4. Chicago, AMA, 1980, p 423.
27. Lucas VS Jr, Laszlo J: Delta-9-tetrahydrocannabinol for refractory vomiting induced by cancer chemotherapy. *JAMA* 243:1241-1243, 1980.
28. Marihuana for nausea and vomiting due to cancer chemotherapy. *The Medical Letter on Drugs and Therapeutics* 22:41-43, 1980.
29. Rhein RW Jr: For glaucoma and a host of other ills, it's still wait and see. *Medical World News*, April 28, 1980, pp 48-49.
30. *FDA Position on State Legislation Relating to Marihuana Therapeutic Research Programs*. Rockville, Md, FDA, 1980.

Marijuana in the '80s...

(Continued from page 659)

EKG of the Month

W. BARTON CAMPBELL, M.D.

A 52-year-old man was admitted to St. Thomas Hospital for evaluation of his coronary vasculature three months after a four-hour episode of severe substernal pressure associated with diaphoresis and nausea. There was no further chest discomfort until two weeks prior to admission when he began to have exertional episodes of similar chest pain relieved by rest. Two days prior to admission he awakened from sleep with chest pain which lasted five to ten minutes.

On admission the blood pressure was 104/70 mm Hg, and an S_3 gallop with a grade II/VI pan systolic murmur was present at the apex. An electrocardiogram was obtained (Fig. 1).

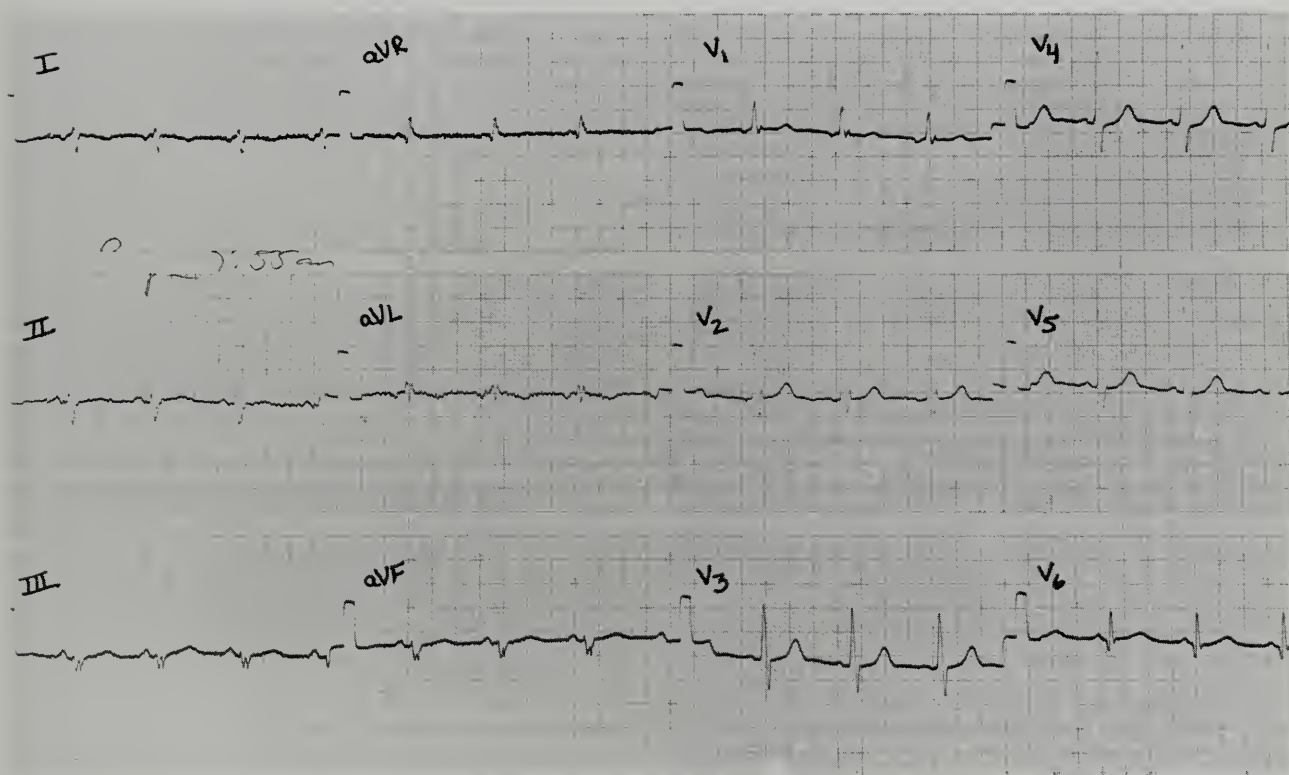


Figure 1

Discussion

This tracing shows a regular rhythm at a rate of 82/min. There are slight irregular variations in the baseline compatible with skeletal muscle depolarization. The P-R interval is normal at 0.16 seconds. A striking feature of this elec-

trocardiogram is the inverted P waves in standard lead I. Inverted P waves in lead I may be caused by an atrial ectopic focus, dextrocardia, or reversal of the right and left arm leads in obtaining the electrocardiogram.

The lack of P wave notching or a "spike and dome" configuration suggests that an ectopic atrial pacemaker causing rightward orientation of P waves is unlikely in this tracing. The precordial leads in Figure 1 show a normal progression

From the Department of Cardiology, St. Thomas Hospital, Box 380, Nashville, TN 37202.

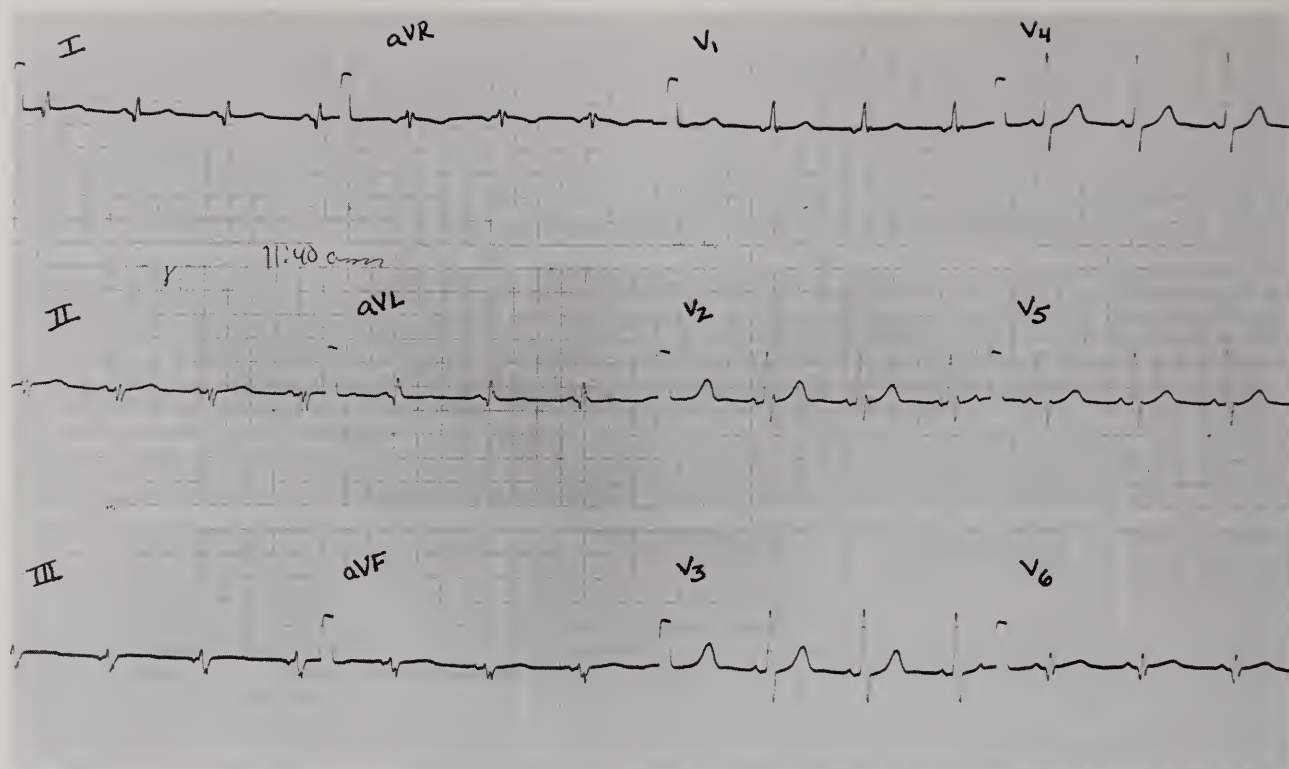


Figure 2

of QRS voltages across the left precordium (the R waves in V_3 and V_4 are much more prominent than the R wave in V_1). This suggests that dextrocardia is not present.

The initial R wave in I and aVL is unusual in the presence of inverted P waves. If the right and left arm leads have been inappropriately reversed in obtaining the electrocardiogram, the frontal plane leads can be looked at in mirror image fashion. Reversal of the arm leads simply reverses the polarity so that negative deflections in lead I become positive deflections. Viewed in this light, the initial R wave in lead I actually represents a Q wave. (This is consonant with the Q wave present in lead V_6 .) With arm lead reversal, aVR looks like aVL while aVL represents aVR. Similarly, leads II and III should be mentally reversed in interpreting these electrocardiograms. This electrocardiogram was felt to represent superior lateral myocardial infarction (Q waves in V_6 and "corrected" Q waves in

I and aVL) with right-left arm lead reversal. The technician was asked to obtain another tracing with correct arm lead placement (Fig. 2). This tracing has the typical appearance of superior lateral infarction of indeterminate age.

The patient underwent cardiac catheterization which showed slight mitral insufficiency related to anterolateral papillary muscle dysfunction with occlusion of a large circumflex coronary artery. There was inferior-basilar hypokinesis suggesting that the prominent R waves in V_1 may represent a posterior component of the infarction. The counterclockwise rotation of frontal plane forces and leftward axis in this case is due to "peri-infarction block" and does not represent anterior hemiblock.

DIAGNOSIS: (1) Superior lateral and posterior myocardial infarction of indeterminate age; (2) Technically inappropriate electrocardiogram due to right and left arm lead reversal.

CAT Scan of the Month

STEPHEN L. GAMMILL, M.D.; JOHN HAMSHER, M.D.; and MILTON L. EVANS, M.D.

A 61-year-old diabetic woman was admitted to the hospital complaining of weakness even though her diabetes was well controlled. A mass could be felt in the abdomen to the left of the midline. The physical examination was otherwise normal. She ran a low-grade fever during the first few days of hospitalization. Urinalysis showed 3-8 RBC/HPF and 20-36 WBC/HPF. Urine and blood cultures were negative.

The left kidney failed to appear on excretory urography, but on retrograde pyelography, the left renal calyces showed irregularities compatible with inflammation, blood clots or necrosis. Representative cuts from a computerized tomographic study are shown in Figures 1 and 2. Please evaluate them and see if you can spot the abnormality.

Discussion

A mass in the left psoas muscle is displacing the left kidney anteriorly. The mass is irregular and contains solid debris, and a psoas abscess was thought to have been the most likely diagnosis. Percutaneous needle biopsy of the mass through the left flank returned a diagnosis of xanthogranulomatous pyelonephritis. The biopsy specimen grew *Escherichia coli* on culture.

Xanthogranulomatous pyelonephritis (XP) is a rare disease of unknown specific etiology. It occurs predominantly in women (11 of 13 cases reported by Gammill, et al).¹ It is usually a chronic disease but may be subacute, is associated with diabetes (7 of 13 cases),¹ may follow pregnancy in young female diabetics, may occur in a well-functioning kidney, may be associated with renal calculi, especially of the staghorn variety (8 of 13 cases),¹ and is most often associated with the *Proteus mirabilis* organism and less often with *E. coli*.

Treatment may consist of nephrectomy or abscess drainage. In the case presented here, the inflammatory response had produced fibrotic and granulomatous tissue that could not be drained or resected. The patient was treated with appropriate antibiotics and will be followed closely both clinically and with serial CAT scans.

From the Departments of Radiology, Urology and Surgery, Baptist Memorial Hospital, 899 Madison Ave., Memphis, TN 38146.



Figure 1. Cut made at the level of the left kidney (K). Note that the left kidney is displaced anteriorly by a mass involving the psoas muscle. (R = Right, L = Left, S = Spine, K = Kidney, P = Psoas Muscle.)



Figure 2. Cut made at the level of the right kidney, inferior to the cut in Fig. 1. Note that the right psoas muscle (P) is normal but the mass on the left produces a marked asymmetry. (R = Right, L = Left, S = Spine, K = Kidney, P = Psoas Muscle.)

DIAGNOSIS: Xanthogranulomatous pyelonephritis.

REFERENCE

1. Gammill S, Rabinowitz J, Peace B, et al: New thoughts concerning xanthogranulomatous pyelonephritis. *Am J Radiol* 125:154-163, 1975.

Emergency Medical Service: Advances in the Care of Amputated Parts

JACK P. POWELL, M.D.

With the advances in microsurgical techniques, the reimplantation and reconstruction of limbs and digits has become more widely available to the general public. It is well known that the initial care of the amputated part in the field, and the manner by which it is transported to the microsurgical center, is quite often a critical determining factor in the viability of the part. Consequently the Division of Emergency Medical Service (EMS), Tennessee Department of Public Health, has incorporated into the EMT training curriculum a major section on the care of amputated parts. This new information will also be incorporated in the EMT refresher course. Basic information is provided to enhance understanding of the results which can be achieved by microsurgical techniques, the initial care and transport of amputated parts, and location of the reimplantation centers in the region. The outline is as follows:

After initial resuscitation and stabilization of the patient (e.g., airway, IVs, spinal cord injury precautions) if other trauma is present, sterile, moist compression dressings are applied to the stump for hemostasis. The patient and amputated part are transported as quickly as possible (within six hours for a hand or arm, 12 hours for digits), with the amputated parts wrapped in sterile gauze moistened with lactated Ringer's solution or saline and placed in a clean plastic bag. The bag is then placed on ice in an insulated container (the part is never in direct contact with the ice), and transported with the patient.

To insure that this format is followed, and that necessary items are immediately available, the EMS Division has promulgated new regulations requiring that specific items be carried on all emergency ambulances. They require clean plastic bags, a styrofoam insulated ice chest, and,

due to the unavailability of ice in the field, chemical cold packs for cooling the part.

A list of reimplantation centers with reimplantation teams on call 24 hours has been made available to all ambulance services and other interested parties such as hospitals, emergency physicians, and surgeons. The names of contact persons at each center are also included. The list follows:

West Tennessee (Memphis):

Baptist Memorial Hospital
Surgery 901-522-5665
Emergency Department 901-522-5511
Campbell Clinic 901-525-2531
Phillip Wright, M.D. (home) 901-767-9241
Greer Richardson, M.D. (home) 901-452-3781
George Wood, M.D.

Middle Tennessee (Nashville):

Vanderbilt
Mike Milek, M.D.
Orthopedics 615-322-2403
Home 615-356-1531
John Franklin, M.D.
Plastic Surgery 615-322-3451
Home 615-373-4091

Adjoining States:

Kentucky, Louisville-Jewish Hospital (Dr. Harold Kleinert)

North Carolina, Durham-Duke University Hospital (Dr. Urbaniak)

Alabama, Birmingham-University of Alabama Medical Center (Dr. Gould)

Mississippi, Jackson-University of Mississippi Medical Center (Dr. Robert Allen Smith)

Arkansas, Little Rock — University of Arkansas Medical Center (Dr. Ed Weber)

With the additional training provided to emergency personnel, the required equipment on the ambulance, and identification of referral centers, the proper care, transport, and ultimate survival of amputated extremities and digits, hopefully, will become everyday reality in all areas of Tennessee.

From the Tennessee Department of Public Health, Nashville. Dr. Powell is medical director of the Division of Emergency Medical Service of TDPH.

Highlights of the TMA Board of Trustees Meeting

July 12, 1981

The following is a summary of the major actions taken by the Board of Trustees of the Tennessee Medical Association at its regular third quarter meeting in Fairfield Glade, Tenn., on July 12, 1981.

THE BOARD:

Impaired Physician Committee	Heard a report that the Impaired Physician Committee has received ten additional identifications since March, bringing the total to 64 identifications.
Communications and Public Service Committee	Heard a report on ten forthcoming workshops in eight cities for medical assistants cosponsored by TMA and American Association of Medical Assistants (AAMA) Oct. 7-30, 1981.
Rural Health Committee	Received a report from the Rural Health Committee, which has selected the 4-H Center in Crossville for the 1981 fall Rural Health Conference.
Committee on Hospitals	Heard a report on activities by organized nursing which seemed designed to discourage entry into any nursing program not in accordance with the American Nurses' Association objective of a two-level nursing progression by 1985. The Committee on Hospitals and the Tennessee Hospital Association Liaison Committee have reaffirmed support for current nurse training programs consistent with TMA House of Delegates Resolution 5-80.
Non-Physicians Attempt To Practice Medicine	Agreed that legislation be introduced again to make it illegal for non-physicians to present themselves as "physicians." Present Tennessee Code limits the use of the word "physician" to M.D. or D.O. only on a chapter-by-chapter basis. There is no overall prohibition or sanction on the use of the words "physician" or "medicine."
Publication of TMA History	Heard an accounting of expenses incurred in publishing the 1930-1980 History of TMA and an update on the sale of the book written by Dr. R. H. Kampmeier of Nashville.
AMA Award Nomination	Endorsed Dr. David McCallie of Chattanooga for the AMA Benjamin Rush Award.
Travel Committee	Approved a recommendation from the TMA Travel Committee for a ten-day trip to Tahiti in February, 1982. The cost of the trip is an estimated \$1,600. The committee also recommended Category 1 medical seminars for all future trips.
Group Insurance Committee	Heard a report regarding rate reduction and plan provision improvements for the TMA Group Life Insurance Plan underwritten by Great-West Life. These improvements, which include a 50% rate reduction in some instances, compare favorably with other carriers and are to become effective Oct. 15, 1981. A letter from the plan's administrator will be sent to the TMA membership to outline the improvements and rate reductions.
Public Awareness Campaign	Agreed that the Communications and Public Service Committee investigate and recommend specifics on proposed TMA participation in the Tennessee Hospital Association Public Awareness Campaign to educate the public on the

reasons behind rising hospital costs. Radio was the primary medium used by THA to implement its program.

By-Law Amendment

Approved and forwarded to the Constitution and By-Laws Committee a proposed By-Law amendment on the nominating committee under Chapter 5, Section 2, proposed to read: If for any reason a member of the Nominating Committee is unable to serve, the Board of Trustees shall select an eligible delegate to serve. Also, the Board agreed that the Nominating Committee's report should be on the agenda of the first session of the House of Delegates at its Annual Meeting.

Annual Meeting Dates

Heard a report on the dates, sites and headquarters for these future TMA Annual Meetings: April 14-17, 1982, at the Hyatt Regency Hotel in Memphis; April 13-16, 1983, at the Opryland Hotel in Nashville; April 11-14, 1984, tentatively scheduled for the Hyatt Regency Hotel in Knoxville; and April 10-13, 1985, in Memphis. The Board agreed that a survey should be taken to determine the possibilities of scheduling the Peabody Hotel in Memphis as a possible site for the 1985 Annual Meeting.

IMPACT Quarterly Report

Heard a report that IMPACT (Independent Medicine's Political Action Committee/Tennessee) currently has about 700 members, and metropolitan medical societies are involved in membership drives. Each physician in Tennessee who isn't an IMPACT member will be receiving a personal letter from the IMPACT chairman, urging IMPACT membership.

SVMIC Quarterly Report

Heard a report that State Volunteer Mutual Insurance Company (SVMIC) has employed Mr. Robert P. Boren as vice president of finances and Mr. John M. Gilbert has been reemployed as vice president of underwriting. The underwriting rates are being studied in an effort to be more competitive, as St. Paul Insurance Co. is the commercial carrier offering the most competition to SVMIC in the state.

Financial Statement

Received and approved the second quarter financial statement of the Association.

Health Clinic Reimbursement

Heard a report that the Department of Public Health has decided to reimburse community health clinics for services to medically needy but not private physicians. The Board agreed that health clinics and private physicians should be treated the same under the reimbursement program. That view is to be communicated to the Government Operations Committee. 

Help for Impaired Physicians

Through its Committee on Impaired Physicians, TMA helps doctors who are suffering from alcoholism, other drug addiction, psychiatric disorders or senility. The thrust of the program is rehabilitative, not punitive. The Committee is composed of physicians who have special expertise in these areas, some from personal experience. Effective treatment for these illnesses is achieved most easily when the disease is detected early and family, friends, and associates are urged to avoid misguided sympathy which enables the condition to deteriorate.

HELP US TO HELP

Call the TMA Impaired Physician Program (615) 327-2711; outside Nashville call collect. Phone service available around the clock.



ALLEN S. EDMONSON

Building With Blocks

The Reagan administration is making a strong effort to change the modus operandi of the federal government in the health field as related to categorical programs. They have struggled with the Congress for several months over their recommendations for a few, originally four, large block grants to each state for health and welfare programs.

The block grants will replace the separate grants for dozens of federally organized and regulated categorical programs which the states have been administering. These separate categorical programs have multiplied over the years as the politicians and bureaucrats in Washington appropriated tax money for the "disease of the year." As a rule these were worthwhile but not necessarily appropriate for all states. Like many if not most federal programs, once started, they seem to continue almost forever.

Because with block grants the states will not have to conform to individual federal program regulations and restrictions, the administration has suggested that these health and welfare funds can be cut 25% without any significant diminution in effectiveness. This at least is the intent of the Reagan people and the opinion of some state health department officials. Flexibility in budgeting and administration at the state level is potentially the big advantage. With block grants, each state can apply the funds as seems most appropriate for its specific needs and build custom programs.

The building of custom health programs in Tennessee must involve health professionals along with the legislature and bureaucrats. Tennesseans should not allow waste or misuse of health funds at any time, but especially not when the opportunity for success is so available. Be sure your legislator knows of your concern and your willingness to get involved in building good programs with our blocks.

Allen S. Edmonson M.D.

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SEPTEMBER, 1981

editorials

Vacancy

Early of a gloomy Sunday morning sometime back I walked into the Pam Pam, an all-night restaurant around the corner from the St. Francis Hotel in San Francisco, and sat down at the counter next to a woman who was more or less eyeing the menu. She had a far-away, early morning look about her. The waitress appeared

about that time and asked, "Coffee?" I said, "Please." The waitress poured mine, and I guess because my neighbor looked as if she needed some, the waitress poured a cup there, too. No sign of life.

The waitress put the coffeepot away and stood before the woman. Still no sign of life. So she took my order and turned it in to the kitchen, then stationed herself before my neighbor, and waited. The conversation went like this.

"Yes?"

"Uh—oh. The number two breakfast—and no potatoes."

"Orange juice or tomato?"

"Uh—orange. And no potatoes."

"How'd you like your eggs?"

"Uh—fried—uh—over easy. And no potatoes."

"Bacon or sausage?"

"Uh—bacon. Oh—and no potatoes."

When I left—and I am a slow eater—the woman had just finished her juice, and was beginning to butter a piece of toast, as her breakfast grew cold in front of her. On the short trip from the counter to the cashier I vaguely wondered what her problem was. Then other things occupied my mind and I forgot about her.

Every now and then, though, she pops up briefly into my stream of consciousness, only to disappear again. I wonder about the potatoes, for instance. She wasn't fat—not thin, but not fat. She probably thought she was. She was youngish, and rather nice looking. Well groomed. Didn't look as if she had been out all night. She didn't look hung-over or distraught. She looked—vacant. A missal in her lap indicated she was headed for mass. It was early, and it was Sunday. The creative urge, flogged all week into activity, doubtless hadn't surfaced yet—even enough to consider breakfast. She probably was resting her brain. I hope she made it to mass. It was an instance, I think, where the flesh indeed was willing, but the spirit was weak.

I know all about that.

It seems to happen every year at about the time a Labor Day editorial is due. I come down to the wire, and nothing has happened. My muse has taken a vacation. The head is stuck in the pelvis—or something like that. At any rate, the birth follows a lengthy dystocia. Perhaps it is because of Labor Day. Labor Day is a day set aside to honor the working man (and the laboring mother?). It is a day he can rest—provided, of course, his family has not decided on a picnic, or

they have not set out to see the world in three days. He can rest—if he can—or if he will.

In honor of the day, I think I'll rest *my* brain.

J.B.T.

The Good News and the Bad

About 25 years or so ago, before the so-called sexual revolution had started, I saw what was considered then a fairly racey movie called *Sexus*, which I believe was an early Polansky film. I don't remember much about it except that today you see material more risqué than that any evening on prime time. I mention it only because a statement by the protagonist, a thoroughly proper man, speaks so much to our human condition. "I'm tired of being good," he said. "Some day I'm going to do something so bad no one will believe it." Whether or not he did I can't recall, but then this editorial speaks only to the expressed sentiment.

The current tendency of our entertainment industry to make heroes of crooks is deplorable, I grant, and it may be worse than it ever was before, but it is not new. James Cagney, Humphrey Bogart, George Raft, and Edward G. Robinson, to name a few, rose to fame portraying heroic villains, who often got our sympathy. You can go back as far as you like. Jean Valjean, Victor Hugo's poor but honest father in *Les Misérables*, because he was driven to a criminal act was thereby excused. Homer's Ulysses, a thoroughgoing cheat, was excused because he was "on our side." You can add your own before, after, or in between.

To watch, as an example, Devil's Island convicts Humphrey Bogart and Peter Ustinov performing compassionate, even heroic acts in the film *We're No Angels* makes us feel good, and their erasure of two scoundrels who obviously needed doing in is accomplished in such a light-hearted fashion that it all seems perfectly proper. Although Bogey proclaims, "We're no angels," they are shown exiting the final scene with bright halos not only over their own heads, but also over the box containing their pet viper Adolph, the actual "not so villainous" villain. We are gently led to vicariously identify with them. Implicit in all of this is mankind's wish to be good and bad at the same time—bad enough to "have fun," but good enough to barely escape hell.

It puts me in mind of the story about Moses' return from Mount Sinai with some good news and some bad news. "The good news," he said, "is that I've finally gotten Him down to ten. The bad news is that adultery is still one of them."

J.B.T.

Pomp and Circumstance and Circumstances

Whatever you may think of England and the British Crown, or even whether you think of them at all, you have to admit that the wedding of Charles Phillip Arthur George, among other things Prince of Wales, and the Lady Diana Frances Spencer, was quite a show. The English, always great ones for pageantry, outdid themselves. It is estimated that the wedding was watched live by over 800 million people. I expect that estimate is vastly conservative. Although England once again occupies its familiar position as an embattled little island, and though as always the crown has its detractors, there is no indication that the monarchy is in peril. A couple of weeks before the wedding I saw "Up the Royal Wedding" penned on the men's room wall in an Edinburgh pub, but outside, bunting was going up, and enthusiastic preparations were under way throughout London. Prince Charles, the Queen, and the wedding itself seemed on the whole genuinely popular among the British—when you could find them among the alien crowds. One of our guides labeled herself an "unapologetic royalist." It was apparent on the wedding day there are a lot more of them.

Everyone and everything, even the weather, cooperated to make the wedding a glamorous, memorable affair. Unless directly involved, one was able to put aside the Liverpool riots and the Belfast death watch for a while and enjoy the pomp and circumstance. I must confess, though, that were it not for the glorious music it all would have looked better to me on the "telly" with the sound off, interrupted as it was all too frequently by the peddlers of drivel with their often uncalled for gratuitous and sometimes even insulting snide comments.

There is nothing more English than pomp and circumstance; Charles and Diana chose to be married in St. Paul's Cathedral instead of Westminster Abbey because in St. Paul's there is

more room for more ceremony.

There is also nothing more English than the royal family, *si*?

Well, yes and no. Tracing the ancestry of the crowned and once crowned heads of Europe gives cause for confusion. Almost all of them descended from Queen Victoria, who had nine children. Their father, Prince Albert, was German, of the House of Weffin, which George V, for obvious reasons, changed to Windsor during World War I. George I of England, from whom Victoria descended, and who wore the crown about a hundred years earlier, was born in Hanover and spoke only German. He became king because his mother Sophia was the daughter of James I. World War I was really a family feud among Victoria's grandchildren, although it involved a few other people.

My forebears fought the English as Scots until the early 1500s, when they began to fight them as Irish. They did that for a couple of hundred years, and then as American Colonials fought the English again. Since this was common to a large majority of the people in the South, and since Prince Albert was instrumental in aligning England against the Confederacy, there was some question as to which side the United States should be on when World War I broke out.

Much earlier, the Celts overran Europe, and understandably stopped in western Ireland. The Vikings, who were also partly Celtic, overran northern Europe, including England, Scotland, and Ireland, not to mention North America. The Norman French, who were partly Celtic, Teutonic, Roman, and what have you, overran Saxon (Danish and Celtic) England, and the English, in turn, invaded Scotland and Ireland. Sure, an' it's a mixed up lot we all are. There ain't been a purebred Scot, Irishman, or anything else for many a century.

There were no human inhabitants of the Western Hemisphere until a few—perhaps fifty—thousand years ago, when the first immigrant arrived from Asia. There are therefore no native Americans. So when does one become American? There is nothing more English than the royal family because they chose to be English and are accepted as such. Anyone who has chosen to become an American citizen—and that should be all of us who live here—is an American. We seem not always to accept newcomers—or even some “oldcomers”—as such.

If we do, they often wouldn't know it.

J.B.T.



Child Restraint

To the Editor:

Halbert B. Dodd, II, M.D., expresses his feeling in the March issue of the *Journal* that we interfere with freedom of choice by requiring that our young children are protected from the highway epidemic which is our leading killer. Dr. Dodd feels that adults should have the freedom to choose death for infants and children for whom they are responsible. These adults, through lack of exposure to the terrible carnage of our highways, do not understand they are making that choice until those they love fall victim to the killer (*J Tenn Med Assoc* 74:210, 1981).

Dr. Dodd prefers to have these young infants and children and their families suffer needless tragedies with needless injury and death so that the adults learn individually, through exposure, of this terrible highway epidemic.

In the first 12 months following enactment of our Child Passenger Restraint Law, there were 35 children under 4 years of age seen in our emergency room because of injuries received in traffic accidents. Six of these children, none of whom were restrained, required admission because of the seriousness of their injuries. All six had head injuries. Five of these six had skull fractures. One infant died with multiple injuries including a widely separated stellate skull fracture. One little girl lived... impaired... after multiple injuries including skull fracture, epidural hematoma, intracerebral hemorrhages, pulmonary contusion with hemothorax, hemoperitoneum, and fractures of the humerus, clavicle, scapula, and thoracic vertebrae with paraplegia. She had multiple tongue lacerations that required a separate trip to the operating room after she was stabilized.

Just six children under 4 years of age? Six normal, previously healthy children suffered serious injury or death which was preventable by enforcement of our Child Restraint Law.

Those of us who must witness this unnecessary suffering by children and their families at the scene of the accident as law enforcement personnel and rescue personnel or at hospitals as medical personnel recognize the need for the law and its enforcement! Dr. Dodd, as so many of our adults, has been protected from feeling this tragedy firsthand. It is because there are so many individuals like Dr. Dodd, who must suffer personally before intellectual fact has the necessary associated emotional realization which leads to full tragic understanding, that this law be-

came necessary to protect our children.

During the Child Passenger Safety Program period of activity (1977-1980) there was increased awareness of the law in parents of children under the age of 4 to 95%! However, maximum utilization of child restraint devices in our state reached 29%. It is because of this discrepancy that we have worked diligently with law enforcement personnel to have the law enforced. Protection of our children requires a successful liaison effort between medical and law enforcement personnel.

Our electorate have shown their sense of responsibility. In March of 1981, the loophole allowing these young children and infants to ride in the lap of an adult was closed through a vote of 22 pro and 9 con in the Senate and 82 pro and 12 con in the House.

I regret that Dr. Dodd, because of his lack of personal exposure to this waste of human life, struggles to defeat us.

On Saturday, June 20, Knoxvilleians witnessed the loss of another child, *unnecessarily*, to this killer. A loving father, driving his station wagon, had one 20-month-old child properly restrained in a child restraint device and a 3-year-old child asleep in the luggage compartment as he pulled in front of a tractor trailer truck. Following the collision, rescue personnel removed one uninjured child from a child restraint device and one dead child. If this child had been given freedom of choice, he would have chosen to live. Without the law, our infants and children may not be given their choice.

We know that child restraint devices can prevent 90% of the deaths that occur in traffic vehicle accidents in these young children. I ask Dr. Dodd to join us, who have had the misfortune to add emotional realization to intellectual knowledge through exposure, and give our infants and children protection from this leading killer.

Martha Bushore, M.D.
Director of Emergency Services
East Tennessee Children's Hospital
2018 Clinch Ave.
Knoxville, TN 37916

new members

The JOURNAL takes this opportunity to welcome these new members to the Tennessee Medical Association.

BRADLEY COUNTY MEDICAL SOCIETY

David L. Moskowitz, M.D., Cleveland

BUFFALO RIVER VALLEY MEDICAL SOCIETY

Ramesh K. Reddy, M.D., Decaturville

CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY

Clarence L. Fennewald, M.D., Hixson

KNOXVILLE ACADEMY OF MEDICINE

Randall L. Dabbs, M.D., Louisville
Stephen H. Dill, M.D., Knoxville
Michael L. Eisenstadt, M.D., Knoxville
Robert C. Jackson, M.D., Knoxville
Keith F. Kraemer, M.D., Knoxville
James J. Presswood, M.D., Knoxville
Steven W. Reed, M.D., Knoxville
Buford E. Rowe, M.D., Knoxville
Joseph A. Weinberg, M.D., Knoxville

MONTGOMERY COUNTY MEDICAL SOCIETY

Robert D. Doty, Jr., M.D., Clarksville

NASHVILLE ACADEMY OF MEDICINE

James H. Guildford (student), Nashville
Robert M. Hutton, M.D., Nashville
David M. Moroney, M.D., Nashville
Felix R. Tormes, M.D., Madison
Alan C. Winfield, M.D., Nashville

SULLIVAN-JOHNSON COUNTY MEDICAL SOCIETY

Pickens A. Grant, M.D., Bristol

WASHINGTON-CARTER-UNICOI COUNTY MEDICAL ASSOCIATION

Barbara O. Kimbrough, M.D., Johnson City

personal news

Scott Portis, M.D., has been elected chief of staff at Carroll County General Hospital in Huntingdon. Other officers elected include *Jerry Atkins, M.D.*, vice chief of staff; and *Steve Williamson, M.D.*, secretary.

David A. Smith, M.D., has been elected chief of staff at Volunteer General Hospital in Martin. Other officers elected include *Michael Hinds, M.D.*, vice chief of staff; and *Lou Manning, M.D.*, secretary.

The following TMA members have been inducted as Fellows of the American College of Radiology: *Clifton E. Greer, Jr., M.D.*, *Richard M. Heller, M.D.*, *Edwin H. Mitchell, M.D.*, and *Clyde W. Smith, M.D.*, all of Nashville.

TMA Members Receive AMA Physician's Recognition Award

Ninety-four TMA members qualified for the AMA Physician's Recognition Award during the month of June 1981.

To qualify for the PRA, a minimum of 150 hours of continuing medical education must be earned over a three-year period; 60 of these hours must be Category 1.

This list does not include members who reside in other states. Names of additional PRA recipients will be published as they are received from AMA.

Warren A. Alexander, M.D., Covington
 David D. Alfery, M.D., Nashville
 Joe P. Anderson, M.D., Memphis
 Ira L. Arnold, M.D., Chattanooga
 Robert F. Baker, M.D., Sparta
 William M. Bielskis, M.D., Memphis
 Bettye C. A. Boatwright, M.D., Chattanooga
 James H. Bowman, M.D., Bristol
 David M. Bratton, M.D., McMinnville
 Patrick H. Burkhart, M.D., Maryville
 Steven T. Charles, M.D., Memphis
 James F. Cleveland, M.D., Englewood
 Sue C. Cox, M.D., Chattanooga
 David J. Creutzinger, M.D., Knoxville
 John P. Curlin, M.D., Jackson
 Mark L. Donnell, M.D., Madison
 Robert T. Doster, M.D., Nashville
 John H. Dougherty, M.D., Fairfield Glade
 Arnold M. Drake, M.D., Memphis
 John A. Eaddy, M.D., Knoxville
 John W. Ellis, M.D., Trenton
 James O. Fields, M.D., Milan
 Don A. Flora, M.D., Kingsport
 Noel T. Florendo, M.D., Memphis
 Augustus C. Ford, M.D., Chattanooga
 Harry Friedman, M.D., Memphis
 Frank H. Genella, M.D., Oak Ridge
 Joel T. Hargrove, M.D., Columbia
 Robert L. Harrington, M.D., Dyersburg
 Charles B. Harvey, M.D., Tullahoma
 David G. Heald, M.D., Oak Ridge
 Charles C. Hudson, M.D., Columbia
 Maxwell E. Huff, M.D., Oneida
 Nat E. Hyder, M.D., Johnson City
 Arthur E. Jacobs, M.D., Memphis
 David W. Jones, M.D., Johnson City
 Wesley F. Jones, M.D., Lexington
 Duval H. Koonce, M.D., Jackson
 Richard A. Krause, M.D., Chattanooga
 Sarbjeet S. Kumar, M.D., Springfield
 John W. Lamb, M.D., Nashville
 J. T. Layne, M.D., Copperhill
 William A. Loy, M.D., Oak Ridge
 Michael R. Marshall, M.D., Memphis
 O. Jerry Maynard, M.D., Nashville
 James E. McAfee, M.D., Memphis
 Herbert T. McCall, M.D., Madison

Oscar M. McCallum, M.D., Henderson
 David H. McConnell, M.D., Newport
 James E. McKinney, M.D., Chattanooga
 Alexander C. McLeod, M.D., Nashville
 O. L. Merritt, M.D., Dandridge
 James O. Miller, M.D., Madison
 Hays Mitchell, M.D., Cleveland
 Joseph B. Moon, M.D., Knoxville
 John T. Moore, M.D., Algood
 John F. O'Connell, M.D., Germantown
 John E. Outlan, M.D., Collierville
 Howard C. Pomeroy, M.D., Old Hickory
 Norman S. Propper, M.D., Kingsport
 James R. Quarles, M.D., Springfield
 James H. Ragsdale, M.D., Union City
 Ramesh K. Reddy, M.D., Decaturville
 Nathan A. Ridgeway, M.D., Kingsport
 Barrett F. Rosen, M.D., Nashville
 Deborah J. Ruark, M.D., Old Hickory
 Lehman C. Sammons, M.D., Memphis
 Allen L. Schlamp, M.D., Jackson
 Grover F. Schleifer, M.D., Union City
 George W. Shannon, M.D., Jackson
 James W. Simpson, M.D., Hickory Withe
 Avron A. Slutsky, M.D., Memphis
 William N. Smith, M.D., New Tazewell
 Jay M. Sullivan, M.D., Memphis
 Helen L. B. Tepley, M.D., Chattanooga
 Jack Tepper, M.D., Chattanooga
 Howard W. Thomas, M.D., Savannah
 Lloyd R. Thomas, M.D., Memphis
 William P. Titus, M.D., Clarksville
 Vincent B. Tolley, M.D., Sevierville
 Bruce I. Turner, M.D., Nashville
 Ronald G. Twilla, M.D., Milan
 Dale A. VanSlooten, M.D., Lewisburg
 Sidney D. Vick, M.D., Memphis
 Nguyen Luu Vien, M.D., Union City
 Joseph F. VonAlmen, M.D., Lewisburg
 Edward H. Welles, M.D., Dresden
 Herbert P. Whittle, M.D., Charleston
 James H. Williams, M.D., Milan
 Robert E. Wilson, M.D., Kingston
 James B. Witherington, M.D., Memphis
 Charles D. Wohlwend, M.D., Knoxville
 John K. Wright, M.D., Nashville
 Ja-Nan Yu, M.D., Manchester

Chapman Elected to AMA Post

John E. Chapman, M.D., dean of Vanderbilt University School of Medicine, was elected chairman of the Section on Medical Schools for two years at the 1981 annual meeting of the American Medical Association in Chicago.

The Section on Medical Schools was established four years ago by the AMA to recognize and invite participation of medical schools more directly into the affairs of American Medicine as reflected in actions of the AMA.

Dr. Chapman first assumed the chairmanship of the Section on Medical Schools on Feb. 25, 1981 when Ed Brandt, M.D., vice president of Medical Affairs of the University of Texas system and chairman of the Section on Medical Schools of the AMA, became Assistant Secretary of Health and Human Services. Dr. Chapman then moved to the chairmanship from the vice chairmanship. On June 6, 1981 at a general election of the Section, Dr. Chapman was elected chairman.

The Section on Medical Schools represents the 123 medical schools in the United States and reflects membership of 349 representatives from these schools. In addition, there are some 20 state delegates, 34 specialty delegates, and 35 council members within the organizational structure of the AMA. The Section leadership meets frequently with students and resident physician sections to more fully reflect the views and circumstances of faculty, medical students and resident physicians.

The Section has dealt at its annual meeting with several issues important to American Medicine, and in particular medical education and medical schools, including accreditation, quality assurance and examination for licensure. Other issues currently include requirements and activities in continuing medical education for physicians, issues surrounding licensure and examination of students, foreign medical graduates and their entry into American Medicine, accreditation programs for American Medicine and review of these programs, federal funding of medical education and in particular student aid, specialty training and education as well as resident education. Matters of medical education priorities are also prominent.

Dr. Chapman also serves as a member of the Administrative Board of the Council of Medical Deans and member of the Executive Council of the American Association of Medical Colleges. His special professional interest is in pharmacology; he holds a pro-

fessorship in that discipline and serves nationally as vice president of the American College of Clinical Pharmacology.

national news

From the AMA's Office in Washington, D.C.

Budget Bill Passes

After a frantic burst of activity, Congress has settled the budget reconciliation bill, voted on tax cuts, and departed for a month-long vacation with much of the legislative work for the session behind it.

Medicaid will not be cut as deeply as the administration wished and the block grant proposal was softened considerably under the budget compromise agreed to by the House-Senate conferees.

The administration was delighted with the overall budget reconciliation compromise that pared spending next fiscal year by \$37 billion, but the administration was forced to retreat on the two key health items—Medicaid and block grants—that had threatened to stall the huge conference negotiations on the House and Senate budget bills.

The flat 5% cap that the administration wanted to impose on increased federal outlays for Medicaid next year was thrown out. The Senate had voted a 9% cap, but the House had approved a formula decreasing federal payments over the next three years by 3%, 2%, and 1%.

The conference compromise reduced projected costs by 3%, 4% the following fiscal year, and 4.5% the next year. Savings are estimated to be about \$1 billion a year, about what the administration sought.

A controversial Senate plan to drop the minimum federal contribution to states to 40% from the present 50% was a casualty of the conference. A dozen larger states would have been especially hard hit.

Sen. Orrin Hatch (R-Utah), chairman of the Senate Labor and Human Resources Committee, made a determined fight to hold the line on the administration's plan to put 26 categorical health programs into block grants to the states.

With his back against the wall and House conferees not budging, Hatch finally took the unusual step of asking the White House to endorse any concessions he might have to make. The clearance was granted and the impasse over block grants was broken.

The administration had proposed to break the 26 programs that cost some \$4 billion a year into two block grants, giving the states a free latitude to spend their allotments within the blocks.

The compromise calls for three block grants and for

continued attachment of certain federal strings on all programs involved. The three blocks cover preventive health, health services, and primary care.

The controversial family planning program would remain as a categorical program for three years during which time Health and Human Services (HHS) Secretary Richard Schweiker would make a study of the program.

The preventive health block grant would include home health programs, rodent control, fluoridation, health education, hypertension, emergency medical services, rape crisis centers and health incentive programs.

The health services block combines mental health, and alcohol and drug abuse prevention.

The primary care block grant primarily covers community health centers.

Programs excluded from block grants include, in addition to family planning, venereal disease control, child immunization, tuberculosis control and migrant health programs.

However, two of the three block grants that emerged from conference were so limited as to be little more than categorical. Under the Health Services block grant, for example, states next year must allocate funds next fiscal year among mental health, alcohol and drug abuse programs as they have in the past. They can shift funds about by 5% the following year and 15% the next.

The three-year authorizations for the block grants were:

- Preventive Health—\$92 million, \$93 million and \$95.5 million with an added \$3 million annually for rape crisis centers.
- Health Services—\$491 million plus \$30 million for alcoholism, \$511 million, \$532 million.
- Primary Care—\$280 million, \$302 million, and \$327 million.

Under the agreement, the health planning program grants were allowed to continue but with cuts. States were allowed to reduce the number of health systems agencies.

The administration would be allowed to eliminate as many as 30% of the 187 Professional Standards Review Organization (PSRO) programs. The House bill would have permitted the President to kill the program within a few years.

Authority was given in the budget bill to phase out the Public Health Service hospitals starting next fiscal year.

Programs reauthorized included Health Maintenance Organizations (HMOs), Health Statistics Center, Health Services Research Center, Health Care Technology Center and the National Library of Medicine.

The budget bill cleared the way for C. Everett Koop, M.D., to become Surgeon General by removing the age limit for the job and the requirement that the nominee have experience within the PHS.

The existing adolescent pregnancy program was continued with a new \$10-million Senate program added for research on sexual chastity and more than \$6 million for storefront and other operations to counsel on prevention of promiscuity, etc.

No major changes were made in Medicare, but a House provision was adopted to increase by \$28 the amount patients must pay hospitals before the program picks up the expense. Rejected was a House proposal to require Medicare patients to pay \$1 a day for each of the first 60 days of hospitalization.

Model Brain Death Law Recommended

A presidential commission has recommended that the states adopt a model law that would allow physicians to declare a person dead whose brain has stopped functioning.

In the past, death was said to occur when breathing and heartbeat stopped, and 23 states still adhere to this tradition. Advances in medical technology, which permit respiration and circulation to be prolonged artificially, however, have made this definition obsolete.

Under the Uniform Determination of Death Act, "an individual who has sustained either (1) irreversible cessation of circulatory and respiratory functions, or (2) irreversible cessation of all functions of the entire brain, including the brain stem, is dead."

The law does not specify criteria or tests to be used in determining death, allowing physicians to make decisions using the most up-to-date medical standards.

The AMA, American Bar Association, and National Conference of Commissioners on Uniform State Laws have endorsed the model law. Twenty-seven states have some sort of law allowing brain-based determination of death.

The recommendation was made by the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research.

AAMC Pushes Stiff FMG Testing

The Association of American Medical Colleges (AAMC) has said that all foreign medical graduates (FMGs) should pass a practical "hands on" examination and that U.S. citizens who are FMGs should be required to pass as stiff a written test as foreigners.

A position paper adopted by the AAMC says domestic students are repeatedly evaluated on their essential skills and personal professional qualifications in a variety of educational settings. After passing a written examination, FMGs "should undergo an evaluation in prepared test centers in which qualified

observers can evaluate their clinical skills and assess their personal professional qualifications," the AAMC said.

U.S. FMGs are asked only 6% of the questions about subjects in the basic sciences that domestic graduates are asked, the report said. Furthermore, the Americans who have graduated from medical schools abroad are certified if they pass an examination prepared by the Educational Commission for Foreign Medical Graduates (ECFMG) that has 62% fewer test items and 88% fewer questions in basic sciences than the test administered to alien graduates in the test known as the Visa Qualifying Exam (VQE).

"It is difficult to understand why U.S. citizens should be accorded ECFMG certification on the basis of such a lesser evaluation, particularly in light of the specific negative comments of the GAO (General Accounting Office) report relating to several of the schools to which most U.S. citizens have access," said the report.

"It is even more difficult to understand why the ECFMG persists in certifying U.S. citizens on the basis of passing a 360-item examination when one compares it to the examination that over 75% of the graduates from our domestic schools have passed at the time they enter graduate medical education," the AAMC said, noting that the domestic test is composed of 1,840 questions.

Measures currently employed to determine the adequacy of the medical education of the more than 10,000 Americans studying medicine abroad "do not approach equivalency," the report said. "Thus, those who enroll in the foreign-chartered schools to which most U.S. citizens have access may return and eventually practice medicine deficient in both knowledge and professional skills."

The AAMC said proprietary medical schools attracting U.S. citizens abroad "now threaten to compromise" the achievements of medical education in this country. These foreign schools "press both public and private policymakers to provide special opportunities and privileges to their enrollees."

Imbibation and Gestation Don't Mix!

Women who are pregnant or considering pregnancy should not drink alcohol and should watch for foods and drugs containing alcohol, a Surgeon General's advisory says.

"Sizable and significant increases in spontaneous abortions have been observed at reported alcohol consumption levels of as low as one ounce of absolute alcohol twice a week," the advisory warned. (Two standard shots of hard liquor contain an ounce of pure alcohol.)

The report also noted that women who drink an average of an ounce of absolute alcohol a day while pregnant risk bearing children who are significantly underweight.

Edward N. Brandt, M.D., Assistant Secretary for Health and acting Surgeon General, urged physicians, in an individual mailing, to pass the warning on to their patients.

The advisory also warned that:

- A woman who drinks enough to be diagnosed as an alcoholic risks bearing a child with fetal alcohol syndrome (FAS), a collection of birth defects associated with mental retardation, central nervous system disorders, growth deficiencies, and a cluster of facial abnormalities and other malformations.

- A woman who drinks heavily, even if she does not bear a child with FAS, risks bearing a child with one of the individual defects included in the syndrome.

- Heavy alcohol consumption is known to decrease mother's milk, and alcohol is transmitted to nursing infants through breast milk.

The advisory said the effects of alcohol consumption on pregnancy appear to be independent of variables such as maternal nutrition and smoking habits.

The letter to physicians urged them to ask their patients who are pregnant or considering pregnancy about alcohol consumption and include the information in their medical records.

announcements

CALENDAR OF MEETINGS

NATIONAL

Oct. 1-4	American Society of Internal Medicine — Grand Hotel, New York
Oct. 10-18	International Body Imaging Meeting — Hyatt Regency Hotel, Maui, Hawaii
Oct. 11-15	Medical Group Management Association — New Orleans Hilton, New Orleans
Oct. 11-16	American College of Surgeons — Fairmont, San Francisco
Oct. 11-16	American Physiological Society — Hilton Hotel, Cincinnati
Oct. 13-17	American Society of Therapeutic Radiologists — Hyatt and Crown Center, Kansas City, Mo.
Oct. 15-17	Child Neurology Society — Minneapolis
Oct. 15-18	American Academy of Psychiatry and the Law — Del Coronado, San Diego
Oct. 15-18	American Association for Hand

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|----------------|---|------------|--|
| Oct. 15-18 | Surgery — Sheraton Centre, New York | Nov. 1-6 | Georgia Wild Congress Center, Atlanta |
| Oct. 17-21 | American Society of Bariatric Physicians — Aladdin, Las Vegas | Nov. 3-9 | American Academy of Physical Medicine and Rehabilitation — Town and Country Hotel, San Diego |
| Oct. 17-23 | American Society of Anesthesiologists — Hilton and Fairmont, New Orleans | Nov. 3-11 | American Medical Women's Association — Bonaventure, Los Angeles |
| Oct. 18-23 | College of American Pathologists — Hilton Hotel, Las Vegas | Nov. 4-7 | American Society of Cytology — Chase-Park Plaza Hotel, St. Louis |
| Oct. 18-23 | American Society of Maxillofacial Surgeons — New York Hilton and Americana, New York | Nov. 5-7 | American Group Practice Association — Century Plaza, Los Angeles |
| Oct. 18-23 | American Society of Plastic and Reconstructive Surgeons — New York Hilton and Sheraton Centre, New York | Nov. 10-14 | Central Society for Clinical Research — Drake Hotel, Chicago |
| Oct. 23-25 | American Academy of Neurological and Orthopaedic Surgeons — Caesar's Palace, Las Vegas | Nov. 11-12 | Cancer 1981/Cancer 2001 — An International Colloquium (sponsored by Univ. of Texas M.D. Anderson Hosp. and Tumor Inst.) — Shamrock Hilton Hotel, Houston |
| Oct. 25-29 | American College of Chest Physicians — Hilton Hotel, San Francisco | Nov. 15-18 | AMA Medical Staff Leadership Seminar — Biltmore Hotel, Los Angeles |
| Oct. 26-28 | American College of Gastroenterology — Sheraton Bal Harbour, Bal Harbour, Fla. | Nov. 15-20 | Southern Medical Association 75th Annual Scientific Assembly — The Rivergate, New Orleans |
| Oct. 29-31 | Society for Adolescent Medicine — New Orleans | | International College of Surgeons — Hotel del Coronado, Coronado, Calif. |
| Oct. 30-Nov. 1 | AMA Sarasota Regional Meeting — Sarasota Hyatt, Sarasota, Fla. | | |
| Oct. 30-Nov. 1 | American Senior Physicians Association — Sarasota Hyatt, Sarasota, Fla. | Oct. 14-16 | STATE
American Academy of Occupational Medicine — Hyatt Regency, Nashville |
| Oct. 31-Nov. 5 | American Academy of Pediatrics — Minneapolis | Oct. 29-30 | Tennessee Society of Internal Medicine and American College of Physicians, Tennessee Region (Joint Annual Meeting) — Vanderbilt Holiday Inn, Nashville |
| Nov. 1-5 | American Public Health Association — Los Angeles | | |
| Nov. 1-6 | American Academy of Ophthalmology — | | |

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Medical Director

*Diplomate, American Board
of Internal Medicine
Subspecialty of Rheumatology*

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Hot Springs, Arkansas 71901

The continuing medical education accreditation program of the TMA has full approval by the Accreditation Council for Continuing Medical Education. An accredited institution or organization may designate for Category 1 credit toward the AMA Physician's Recognition Award those CME activities that meet appropriate guidelines. If you wish information as to how your hospital or society may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203.

IMPORTANT NOTICE

Published in this section are all educational opportunities which come to our attention which might be of interest to our membership. As some of these are very long, full year schedules, and others are detailed descriptions of courses, in order to conserve space, most of them will be published in only one issue of the Journal.

IN TENNESSEE

VANDERBILT UNIVERSITY

Clinical Training Program

Opportunities for advanced clinical education for physicians in family practice and in various subspecialties have been developed by the School of Medicine and the Division of Continuing Education of Vanderbilt University. The practicing physician, with the guidance of the participating department chairman, can plan an individualized program of one to four weeks to meet recognized needs and interests. The experience will include contact with patients, discussion with clinical and academic faculty, conferences, ward rounds, learning individual procedures, observing new surgical techniques, and access to excellent library resources. Experience in more than one discipline may be included.

Participating Departments and Divisions

Allergy & Immunology	Samuel Marney, M.D.
Anesthesiology	Bradley E. Smith, M.D.
Cardiology	Gottlieb C. Friesinger, III, M.D.
Chest Diseases	James D. Snell, M.D.
Clinical Pharmacology	John A. Oates, M.D.
Dermatology	Lloyd King, M.D.
Diabetes	Oscar B. Crofford, M.D.
Endocrinology	David Rabin, M.D.
	David N. Orth, M.D.
Gastroenterology	Steven Schenker, M.D.
General Internal Medicine	W. Anderson Spickard, M.D.
Hematology	Sanford B. Krantz, M.D.
Infectious Diseases	Zell A. McGee, M.D.
Medicine	Grant W. Liddle, M.D.
Neurology	Gerald M. Fenichel, M.D.
Obstetrics & Gynecology	Lonnie S. Burnett, M.D.
Oncology	Robert Oldham, M.D.
Orthopedics	Paul W. Griffin, M.D.
Pathology	William H. Hartmann, M.D.
Pediatrics	David T. Karzon, M.D.
Psychiatry	Marc H. Hollender, M.D.
Radiology	A. Everette James, Jr., Sc.M., J.D., M.D.
Renal Diseases	H. Earl Ginn, M.D.
Rheumatology	Theodore Pincus, M.D.
Surgery	
Cancer Chemotherapy	Vernon H. Reynolds, M.D.
General	H. William Scott, Jr., M.D.
Neurological	William F. Meacham, M.D.
Ophthalmology	James H. Elliott, M.D.
Oral	H. David Hall, D.M.D.

Pediatric	James A. O'Neill, M.D.
Plastic	John B. Lynch, M.D.
Renal Transplantation	Robert E. Richie, M.D.
Thoracic & Cardiac	Harvey W. Bender, M.D.
Urology	Robert K. Rhamy, M.D.

Eligibility: All licensed physicians are eligible. **Administrative Fee:** \$200 per week. **Credit:** AMA Physician's Recognition Award (Category 1) and AAFP Continuing Education Accreditation. **Application:** For further information and application, contact Continuing Medical Education, Vanderbilt University Medical Center, Nashville, TN 37232, Tel. (615) 322-2716.

Continuing Education Schedule

October	J. William Hillman Visiting Professor in Orthopedics
Oct. 1-4	3rd Annual Medical Alumni Symposium
Oct. 28-30	Robert M. Buchanan Lecturer in Dermatology
Oct. 29-31	Update in Therapeutic Decision-Making (ACP Regional Meeting Scientific Sessions)
November	Annual Rhamy-Shelley Lectureship in Urology
Nov. 21-22	Update in Anesthesiology
Dec. 4-5	High Risk Obstetrics Seminar and the Everett M. Clayton Memorial Lecture (10 hours)

For information contact Division of Continuing Medical Education, Vanderbilt School of Medicine, Nashville, TN 37232. Tel. (615) 322-2716.

MEHARRY MEDICAL COLLEGE

Extended Continuing Education Program

Arrangements have been made with the following services and departments in the medical school to allow practicing physicians to participate in that service's activities for a period of one to four weeks. This program provides an opportunity for physicians to study in depth for a specified period. The schedule of activities is individualized in response to the physician's request by the participating department. The experience includes conferences, ward rounds, audiovisual materials and contact with patients, residents and faculty.

Participating Departments

Anesthesiology	Ramon S. Harris, M.D.
Family Practice	John Arradondo, M.D.
Internal Medicine	
Cardiology	John Thomas, M.D.
	Kermit R. Brown, M.D.
	Qamar A. Kahn, M.D.
Chest Disease	Joseph M. Stinson, M.D.
	Paul A. Talley, M.D.
	Edward A. Mays, M.D.
Dermatology	Thomas W. Johnson, M.D.
	David Horowitz, M.D.
Gastroenterology	Ludwald O. P. Perry, M.D.
	Buntwal M. Somayaji, M.D.

General Medicine	Edward A. Mays, M.D.
Hematology/Oncology	Robert S. Hardy, M.D.
Neurology	Calvin L. Calhoun, Sr., M.D.
	Gregory Samaras, M.D.
Obstetrics & Gynecology	Henry W. Foster, M.D.
Ophthalmology	Axel C. Hansen, M.D.
Orthopedics	Wallace T. Dooley, M.D.
Pathology	Louis D. Green, M.D.
	John C. Ashhurst, M.D.
Pediatrics	E. Perry Crump, M.D.
Surgery	
General	Louis J. Bernard, M.D.
Neurological	Charles E. Brown, M.D.
Thoracic and Cardiovascular	David B. Todd, M.D.
	Ira D. Thompson, M.D.
Urology	Marcelle R. Hamberg, M.D.

Fee: \$100 per week. **Credit:** AMA Physician's Recognition Award (Category 1), AAFP Continuing Education Accreditation, and Continuing Education Units by Meharry Medical College. **Application:** For further information contact Frank A. Perry, Sr., M.D., Director, Continuing Education, Meharry Medical College, 1005 18th Ave. North, Nashville, TN 37208, Tel. (615) 327-6235.

Family Practice Board and FLEX Course

Oct. 21-25 Intensive Program for Family Practice Board Certification and FLEX Examination—Hyatt Regency Hotel, Nashville.

For information contact Department of Family Medicine, Meharry Medical College, 1008 18th Ave. North, Nashville, TN 37208, Tel. (615) 327-6572.

EAST TENNESSEE STATE UNIVERSITY

Oct. 7-9 Infection Control
Oct. 16 Pediatrics Prep III: Neonatology
Nov. 2-6 CPR: Faculty Inservice

For information contact Office of Continuing Medical Education, East Tennessee State University, Quillen-Dishner College of Medicine, Johnson City, TN 37614, Tel. (615) 928-6426, ext. 204.

UNIVERSITY OF TENNESSEE

Continuing Education Schedule

This comprehensive listing of UTCHS courses includes programs of the Chattanooga, Knoxville, and Memphis units. The codes (C), (K), and (M) indicate the continuing education unit handling the arrangements for a particular program.

Oct. 3-4	(M)	Ultrasound: A Primer for the Beginner
Oct. 12-14	(K)	Office Ultrasound—Gatlinburg
Oct. 15-17	(K)	2nd Annual Smoky Mountain Seminar in Obstetrics and Gynecology—Gatlinburg
Oct. 22-23	(M)	Medical Alumni Days
Oct. 26-28	(K)	Cancer Concepts 1981—Gatlinburg
Nov. 13	(K)	10th Annual Internal Medicine Symposium

Community-Based CME

Knoxville Campus

Blount Memorial Hospital; Maryville, Tenn.

Every Tuesday; 7-8 a.m. (1 hr. credit)

Jellico Hospital; Jellico, Tenn.

Monthly, third Tuesday; 7-9 p.m. (2 hrs. credit)

Morristown-Hamblen County Hospital; Morristown, Tenn.

Alternate months, third Tuesday; 6:30-8 p.m. (1.5 hrs. credit)

Sweetwater Community Hospital; Sweetwater, Tenn.

Monthly, second Wednesday; 12:00 noon (1 hr. credit)

Takoma Hospital; Greeneville, Tenn.

Monthly, dates vary; 6:30 p.m. (1-2 hrs. credit)

Memphis Campus

UPDATES IN MEDICINE

Carroll County Hospital; Huntingdon, Tenn.

McKenzie Memorial Hospital; McKenzie, Tenn.

Henry County Hospital; Paris, Tenn.

Monthly, third Monday; 6:15-9 p.m. (2 hrs. credit); locations rotate.

Nashville Memorial Hospital, Madison, Tenn.

Monthly, third Tuesday; 12:00 noon (1 hr. credit)

If you would like assistance in planning a community-based CME program, contact the Associate Dean for CME and every attempt will be made to assist you through one of our three campuses.

For further information about any of these courses, please call the appropriate individuals below:

- (C) Mr. LeRoy J. Pickles, Chattanooga
Tel. (615) 756-3370
- (K) Ms. Kay Laurent, Knoxville
Tel. (615) 971-3345
- (M) Ms. Grace Wagner, Memphis
Tel. (901) 528-5547

or write or telephone: James E. Farris, Ed.D., Assistant Dean for CME, University of Tennessee College of Medicine, 800 Madison Ave., Memphis, TN 38163, Tel. (901) 528-5530.

IN SURROUNDING STATES

UNIVERSITY OF KENTUCKY

Mini-Residencies in Office Management Of Emotional Problems

The objective of this course is to give physicians an ideal emotional counseling technique that fits busy office practices. The technique uses a concept of emotions that is consistent with human anatomy and psychophysiology. Yet, the technique requires no more physician time or patient cost than routine evaluations of new patients. Finally, the technique is readily understandable and easy for practitioners to apply.

One, two and three week courses. Minimum of 40 hours per week. **Tuition Fee:** \$350 per week for the 1st & 2nd

week of training; \$500 for 3rd week of supervised practice with patients in the Intensive RBT Treatment Program.

For further information contact Maxie C. Maultsby, Jr., M.D., Office of Continuing Medical Education, Dept. of RBT, University of Kentucky, Lexington, KY 40506.

BOWMAN GRAY

Courses in Ultrasound

Several eight-week courses in sonic medicine will be offered from Sept. 14-Nov. 6, 1981; Jan. 11-March 5, 1982; and April 26-June 18, 1982. *Credit:* 35 hours per week in AMA Category 1.

The following real time courses will also be given: Sept. 10-11, 1981 and Dec. 3-4, 1981 (obstetrics); Dec. 10-12, 1981 (pediatrics); March 22-26, 1982 (abdomen); April 15-16, 1982 (breast).

For information contact James F. Martin, M.D., Center for Medical Ultrasound, Bowman Gray School of Medicine, Winston-Salem, NC 27103, Tel. (919) 748-4505.

WASHINGTON UNIVERSITY

Dec. 10-12 Current Concepts in Cancer Therapy (co-sponsored by Missouri Chapter of the American Cancer Society)—St. Louis. *Credit:* 19 hours AMA category 1.

For information contact Office of CME, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110, Tel. (314) 454-3873.

UNIVERSITY OF LOUISVILLE

Oct. 28 Nutrition in Older Children
Oct. 29-30 15th Annual Newborn Symposium

For information contact Billy F. Andrews, M.D., Department of Pediatrics, University of Louisville School of Medicine, Health Sciences Center, Louisville, KY 40292.

SOUTHERN MEDICAL ASSOCIATION

Medical Staff Leadership Conference

To prepare physicians for the responsibilities involved in hospital staff leadership. *Credit:* 11 Elective hours for AAFP; 11 hours AMA Category 1.

Oct. 1-2 Lodge of the Four Seasons—Lake Ozark, Mo.

For information contact Jeanette Stone, Southern Medical Association, P.O. Box 2446, Birmingham, AL 35201, Tel. (205) 323-4400.

OF SPECIAL INTEREST

AMERICAN ACADEMY OF ALLERGY

Oct. 30-31 Allergy and Immunology for the Clinician—Hyatt on Hilton Head Island, S.C. *Credit:* 14 hours AMA Category 1.

For information contact A. J. Kimber, American Academy of Allergy, 611 E. Wells St., Milwaukee, WI 53202, Tel. (414) 272-6071.

INTERSTATE POSTGRADUATE MEDICAL ASSOCIATION

Oct. 26-29 66th Annual Scientific Assembly of Interstate Postgraduate Medical Association—Atlanta Marriott, Atlanta. (In cooperation with the Georgia Academy of Family Physicians, the Schools of Medicine of Emory University and Morehouse College, and the Medical College of Georgia.) *Credit:* 24 hours AMA Category 1 and AAFP prescribed; 4 hours AMA Category 5a and AAFP elective.

For information contact Program Chairman, Interstate Postgraduate Medical Association, P.O. Box 1109, Madison, WI 53701.

AMERICAN CANCER SOCIETY

Dec. 8-10 Gastrointestinal Cancer 1981—Fontainebleau Hilton Hotel, Miami Beach. *Credit:* 13 hours AMA Category 1.

For information contact Nicholas G. Bottiglieri, M.D., American Cancer Society, National Conference on Gastrointestinal Cancer 1981, 777 Third Ave., New York, NY 10017, Tel. (212) 371-2900.

AMERICAN LUNG ASSOCIATION OF LOUISIANA

Jan. 13-16 SUPERCOURSE VII—A Clinical Course on Critical Pulmonary Care (cosponsored by American Thoracic Society of Louisiana)—Fairmont Hotel, New Orleans. *Credit:* AMA Category 1. *Fee:* \$225 for physicians; \$195 for fellows, residents and interns.

For information contact Course Coordinator, American Lung Association of Louisiana, 333 St. Charles Ave., Suite 500, New Orleans, LA 70130, Tel. (504) 523-5864.

ASSISTANT DEAN/DIRECTOR OF MEDICAL EDUCATION

The Quillen-Dishner College of Medicine is seeking applicants for the position of Assistant Dean/Director of Medical Education for Johnson City Medical Center Hospital. The Assistant Dean/Director of Medical Education is the representative of the Office of the Dean for the College of Medicine at the hospital and is responsible for coordination and participation in the activities of the undergraduate, graduate and postgraduate education within Johnson City Medical Center Hospital, one of the four hospitals affiliated with the College of Medicine. The Director of Medical Education reports directly to the Dean of the College of Medicine, but consults regularly with the hospital administration and medical staff of the hospital. The candidates should be medical doctors, preferably with experience in medical education and medical staff governance.

The College of Medicine is a community-based, VA-affiliated school scheduled to graduate its first class of students in May, 1982. It is located in the Southern Appalachian Mountain area in an attractive, growing, economically sound community with ready access to multiple outdoor recreational facilities.

Interested applicants should contact Dr. Herschel Douglas, Dean, Quillen-Dishner College of Medicine, P.O. Box 23,320A, East Tennessee State University, Johnson City, TN 37614, phone 615-928-6426, ext. 315. ETSU offers equal opportunity in its employment, admissions, and educational activities and is an affirmative action employer.

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West Memphis, Arkansas

Staff positions available in this modern emergency department seeing approximately 12,000 patients annually. Enjoy an excellent income, flexible scheduling, plus the amenities associated with a major metropolitan area.

For details send credentials in confidence to Central States Emergency Physicians, P.C., Suite 101, 1846 Hoffman St., Madison, WI 53704; or call toll-free 1-800-356-7474.

PHYSICIANS NEEDED

Vicksburg, Mississippi

Immediate openings in Internal Medicine, Obstetrics/Gynecology, Orthopedics. Fifteen-member multispecialty group associated with JCAH-approved hospital. Associate Partner status the first year with guarantee plus percentage. No investment.

Contact Karl Hatten, M.D. or H. Dean Andrews, Administrator, Vicksburg Clinic, Vicksburg, Mississippi 39180.

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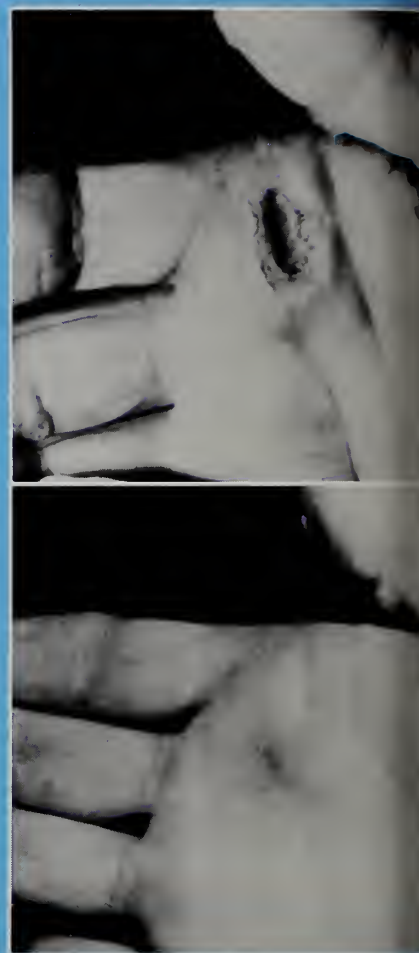
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Endoscopic Sphincterotomy for Choledocholithiasis

A Major Recent Advance for High-Risk Patients

EAPEN THOMAS, M.D. and K. R. REDDY, M.D.

Introduction

In the United States an estimated 12 million women and 4 million men have gallstones and about 800,000 new cases appear each year. Nearly 400,000 of these patients undergo cholecystectomy for symptomatic stone disease.¹ Since the approximate incidence of biliary tract stones in those with gallstones is at least 10%, choledocholithiasis is not an uncommon entity. Besides, a stone in the common bile duct may lead to the serious complication of acute suppurative cholangitis with liver abscesses and sepsis. In cholestatic cases the diagnosis is suspected by a noninvasive study such as ultrasound and then further confirmed by either percutaneous "skinny" needle transhepatic cholangiography (PTC) or endoscopic retrograde cholangiography (ERC). Recent advances in fiberoptic instrumentation have made it possible for us now not only to make an accurate diagnosis but also to extract stones from the common bile duct following a sphincterotomy. We report two cases to emphasize the value of this procedure.

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Case Reports

Case 1. A 65-year-old white man was admitted with four days of generalized crampy abdominal pain which subsequently localized in the right upper quadrant. There was no history of fever or jaundice.

On admission the patient was afebrile and examination of the abdomen revealed tenderness in the right upper quadrant. Laboratory work showed a hematocrit of 41% with a WBC of 8,200/cu mm with 24% bands. Alkaline phosphatase was over 350 IU/liter. GOT was 100 IU/liter and total bilirubin was 3.25 mg/dl. Duodenoscopically the papilla of Vater appeared partially open with erythematous and friable margins (papillitis), and a stone was seen protruding from its orifice. This stone was dislodged using a cannula. During the retrograde cholangiography that followed several stones were seen to drop into the duodenum through the papilla, but several remained in the dilated common duct (Fig. 1). Stones were seen in the gallbladder as well. A sphincterotomy was carried out and all the common duct stones were removed using a Dormia basket (Fig. 2). A few days later the patient underwent a cholecystectomy and common duct exploration with operative T-tube cholangiography, which did not reveal residual stones (Fig. 3). A wide open sphincteric opening was confirmed.

Case 2. A 72-year-old white man was admitted with five days of fever with chills and rigors. He also complained of cough with mucoid sputum. There was no history of abdominal pain or episodes of jaundice in the past.

On admission the patient appeared ill, with a temperature of 103.5 F. He had hepatomegaly of 16 cm span. Laboratory studies revealed an alkaline phosphatase of 685 IU/liter which subsequently rose to 1,200 IU/liter. Total bilirubin was 1.5 mg/dl and GOT 75 IU/liter. White cell count was 11,900/cu mm with 5% bands. A presumptive diagnosis of

CHOLEDOCHOLITHIASIS/Thomas

cholangitis was made and antibiotic therapy started. An endoscopic retrograde cholangiogram revealed five common duct stones and one cystic duct stone which appeared impacted (Fig. 4). He underwent cholecystectomy and choledocholithotomy two days later. Although an operative

T-tube cholangiogram did not show retained stones, post-operatively he continued to have episodes of fever, and a T-tube cholangiogram repeated 2½ weeks later revealed a retained stone (Fig. 5). Manipulations of the common bile duct and attempts at extraction of the stones through the tract of the T-tube under fluoroscopy, using a Dormia basket, were unsuccessful. Endoscopic sphincterotomy was then done. Five days later endoscopic retrograde cholangiography confirmed that the stone had passed (Fig. 6). At this time, sludge in the common bile duct was removed by using a Dormia basket.

Discussion

Endoscopic sphincterotomy, a controlled slitting of the biliary sphincter, was successfully performed in a man in 1973. Since then, several well-trained endoscopists have employed this technique in treating diseases of the biliary tract and sphincter of Oddi, with a success rate of about 81% to 95%.^{2,3} This procedure involves precise identification of the papilla of Vater, and making a high-frequency current incision through the biliary sphincter, using a wire papiloscope. The length of the incision into the



Figure 1. Endoscopic retrograde cholangiogram showing multiple radiolucent gallstones in the dilated common bile duct (case 1).

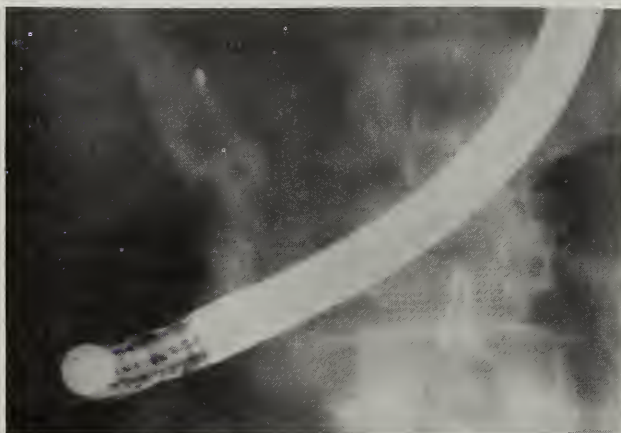


Figure 2. Dormia basket in place in the common bile duct after sphincterotomy (case 1).



Figure 3. Operative T-tube cholangiogram showing some reduction in caliber of common bile duct with no stones and good drainage through the sphincterotomy (case 1).

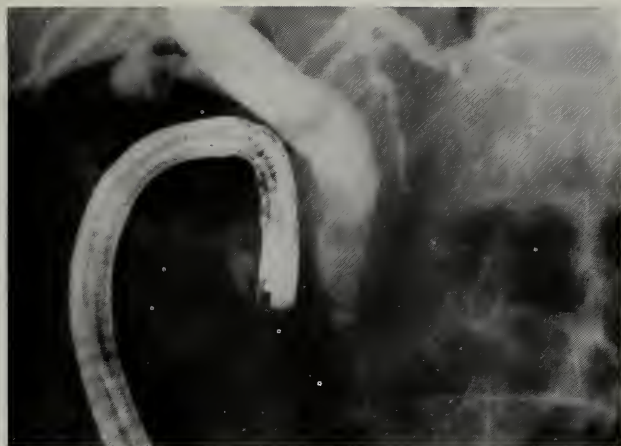


Figure 4. Endoscopic retrograde cholangiogram showing multiple stones in common bile duct which is dilated. Also, a stone in the partially obstructed cystic duct (case 2).



Figure 5. T-tube cholangiogram showing a single retained stone in distal common bile duct. T-tube is partially displaced (case 2).

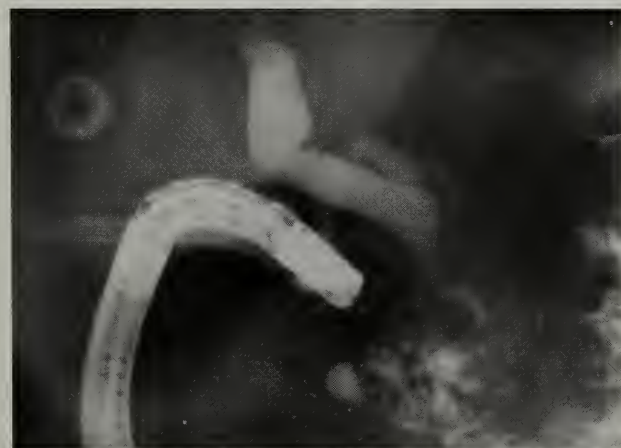


Figure 6. Endoscopic retrograde cholangiogram five days after endoscopic sphincterotomy. Common bile duct is free of calculi with good drainage of contrast into the duodenum (case 2).

duodenal wall may be varied from 0.5 to 1.0 cm. If common duct stones had been identified by retrograde cholangiography prior to the sphincterotomy, such an incision would be wide enough to allow the passage of stones up to 10 mm in diameter. It is now common practice to allow a period of three to five days after endoscopic sphincterotomy for the spontaneous passage of stones, which can occur in about 78% to 80%.^{3,4} Stones that are not passed spontaneously are extracted later using a Dormia basket. If the patient has cholangitis, stone extraction may be attempted immediately after sphincterotomy but this is not preferred. Experience has shown that attempts to remove stones through an intact papilla have been successful only with stones less than 4 or 5 mm, especially if they are pigment stones, as these can be crushed and extracted.⁵ Stones even as large as 20 mm in diameter have been successfully removed after fragmentation.⁶ Sludge and stones less than 4 mm in diameter can also be removed by irrigating the biliary tree and producing simultaneous relaxation of the bile duct using glucagon and anticholinergics, a procedure called lithocentesis.⁷

Endoscopic sphincterotomy is indicated for choledocholithiasis. In elderly and high-risk patients with both gallbladder and common duct stones, it is best done prior to cholecystectomy. By this means it is possible to avoid the necessity for a duodenostomy or choledochoduodenostomy. It is also indicated for providing temporary relief of obstruction in cholangitis and for rarer conditions such as papillary stenosis and as a palliative procedure for ampullary carcinoma. In Japan, it has also been done for ascariasis of the common bile duct.⁸

Absolute contraindications for this procedure are acute pancreatitis, long tube-like stenosis, coexisting abnormalities of proximal bile ducts, and markedly abnormal clotting parameters; relative contraindications are juxta-ampullary diverticula and stones more than 1 cm in diameter.⁴ Most frequently encountered complications are hemorrhage, pancreatitis, and cholangitis, which account for about 80% of all complications.⁸ Rare complications such as perforation, instrument injury and liver abscesses are also reported.^{4,8} Restenosis may occur as a late complication in less than 1%.⁸ Rates of complications have varied from 8.5% to 10%^{4,8} and mortality from 0.4% to 1.2%,^{4,8} whereas transabdominal sphincteroplasty has a mortality of 1.4% to

3.2%.^{9,10} This difference in mortality would appear more significant when one considers the fact that endoscopic sphincterotomy is done in high-risk patients, whereas transabdominal sphincteroplasty is done in all age groups.

In patients with previous gastric surgery, endoscopic sphincterotomy is technically more difficult. One series has reported a success rate of only 66% in patients who had Billroth II anastomosis.¹¹

In our first patient with cholangitis, endoscopic sphincterotomy resulted in relief of biliary obstruction. A second transabdominal exploration of the biliary tract, which is known to be associated with a higher mortality,¹² was prevented in the second patient. In both patients sepsis had been initially controlled by appropriate antibiotic therapy.

With improving instrumentation and increasing expertise it is most likely that endoscopic sphincterotomy will play a major role in the

management of choledocholithiasis in the future and spare transabdominal surgery in high-risk patients. It will also result in reduction in the length of hospital stay and postoperative care.

REFERENCES

1. Small DM: The etiology and pathogenesis of gallstones. *Adv Surg* 10:63-85, 1976.
2. Montori A, Viceconte G, Viceconte GW, et al: ERCP and EPT: Italian experience. *Endoscopy* 2:142-145, 1979.
3. Koch H, Roesch W, Schaffner O, et al: Endoscopic papillotomy. *Gastroenterology* 73:1393-1396, 1977.
4. Safrany L: Duodenoscopic sphincterotomy and gallstone removal. *Gastroenterology* 72:338-343, 1977.
5. Zimmon DS: Endoscopic management of biliary calculi. *Hosp Prac* 13:103-114, Nov 1978.
6. Zimmon DS: Endoscopic diagnosis and management of biliary and pancreatic disease. *Curr Probl Surg* 16:1-46, March 1979.
7. Zimmon DS, Falkenstein DB, Kessler RE: Management of biliary calculi by retrograde endoscopic instrumentation (lithocentesis). *Gastrointest Endosc* 23:82, 1976.
8. Nakajima M, Kizu M, Akasaka Y, et al: Five years experience of endoscopic sphincterotomy in Japan. *Endoscopy* 2:138-141, 1979.
9. Jones AS: Sphincteroplasty (not sphincterotomy) in the treatment of biliary tree disease. *Surg Clin North Amer* 53:1123-1137, 1973.
10. Bohmig HJ, Fritsch A, Kux M, et al: Indikationen und Ergebnisse der transduodenalen sphincterotomie. *Langenbecks Archiv Klin Chir* 323:173-188, 1969.
11. Safrany L, Neuhaus B, Portocarrero G, et al: Endoscopic sphincterotomy in patients with Billroth II gastrectomy. *Endoscopy* 12:16-22, 1980.
12. Way LW, Admirand WH, Dunphy JE: Management of choledocholithiasis. *Ann Surg* 176:347-359, 1972.

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Clemastine Fumarate in the Treatment of Urticaria

REX A. AMONETTE, M.D.

Introduction

Since the clinical introduction of pyrilamine maleate, diphenhydramine hydrochloride, and tripeleminamine hydrochloride more than 35 years ago, the number of antihistamines and antihistamine/decongestant combinations available to the physician has increased substantially. These compounds have been shown to be useful in the management of numerous respiratory and dermatologic conditions, including allergic and vasomotor rhinitis, sinusitis, and urticaria.

Unfortunately, drowsiness often is associated with antihistamine use. While it is usually transient, it can be severe in some patients.

Clinical trials of clemastine fumarate, a member of the benzhydryl ether group, in Europe and Australia during the past 15 years have shown it to be an effective antihistamine for the symptomatic relief of allergic and vasomotor rhinitis, allergic bronchial asthma, exercise-induced asthma, atopic eczema, and urticaria.¹⁻¹⁰ In this retrospective study, clemastine fumarate was administered to 23 patients suffering from acute or chronic urticaria of varying severity. We noted the disappearance of symptoms in the majority of patients, with few reported side effects.

Materials and Methods

The 23 patients, aged 19 to 37 years, all were diagnosed as having either acute or chronic urticaria. Patients were excluded from the study if they had received proximate steroid or other urticarial therapy or had undergone previous desensitization injections. We assessed relief of itching and burning and the appearance or disappearance

of the wheal, one of the classic lesions of urticaria. Patients were supplied with 1.34 mg tablets of clemastine fumarate and instructed to take them three times daily. Treatment generally continued for two to three days or until symptoms subsided.

Results

Individual results are presented in Table 1. Eighteen patients (78%) experienced either significant or complete clearing of their lesions (Table 2). Of the five patients who did not respond, three were forced to discontinue the drug and two required additional drugs to control the urticaria. Side effects were minimal, occurring in only three patients (Table 3). The three patients who discontinued therapy will be described briefly.

Case 3. A 21-year-old woman developed a headache during the second day of treatment and ceased taking the medication because she felt that it was causing the headache. This patient was studying to be a pharmacist and was, therefore, quite cognizant of the possible side effects associated with antihistamine ingestion. As a result, she may have been overcautious. Although her headache disappeared within one day of discontinuing the medication, it was impossible to determine if this complaint was a side effect related to the drug.

Case 4. A 24-year-old man stated one day after therapy initiation that he had become extremely drowsy, "the room was spinning," and he felt "high." The patient was instructed to stop the medication, and within a few hours the symptoms subsided.

Case 6. A 25-year-old woman had been taking codeine tablets in an attempt to treat her urticaria. She developed an allergic reaction to the codeine just prior to receiving the antihistamine, which exacerbated the urticaria. After two days of treatment with clemastine fumarate, the pa-

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tient was advised to discontinue taking the drug. She was given epinephrine, which cleared the lesions.

Of the 18 patients who experienced marked symptomatic relief of the urticaria, only one reported any side effects from the drug. This patient spoke of feeling relaxed and somewhat sleepy, although this did not interfere with her daily activities, and she did not stop taking the medication.

Urticaria is characterized by a local accumulation of wheals with accompanying erythema. In most instances, the mechanism of lesion formation is mediated by histamine. It seems to involve an escape of fluid from the microvasculature into the dermis as a result of a temporary shift in the balance between fluid accumulation and fluid removal via the lymphatic system.

Acute urticaria may be caused by many factors, including drug allergy, desensitization injections, insect bites or stings, or the ingestion of

TABLE 1
PATIENT RESPONSE TO CLEMASTINE FUMARATE

Patient	Type of Urticaria	Result	Side Effects
1	Acute	Complete clearing	None
2	Acute	Worsened; epinephrine and prednisone added to obtain clearing	None
3	Acute	Discontinued drug on second day	Headache
4	Acute	Discontinued drug on second day	Drowsiness, vertigo
5	Acute	Complete clearing	None
6	Acute	Worsened; discontinued drug on third day; epinephrine necessary to clear	None
7	Acute	Clearing	None
8	Acute	Complete clearing	None
9	Acute	Clearing	None
10	Acute with angioneurotic edema	Worsened; epinephrine, prednisone, and diphenhydramine added to obtain clearing	None
11	Acute	Complete clearing	None
12	Chronic	Clearing	None
13	Acute	Complete clearing	None
14	Acute	Complete clearing	None
15	Acute	Complete clearing	None
16	Acute	Complete clearing	None
17	Chronic	Clearing	None
18	Acute and chronic	Complete clearing	Mild drowsiness, sedation
19	Acute	Complete clearing	None
20	Acute	Complete clearing	None
21	Acute	Complete clearing	None
22	Acute	Complete clearing	None
23	Acute	Complete clearing	None

TABLE 2
RESPONSE TO CLEMASTINE FUMARATE

Response	No. of Patients	%
Complete clearing	14	61
Clearing	4	17
Worsened	3	13
Discontinued drug	2	9

TABLE 3
SIDE EFFECTS

Side Effects	No. of Patients	%
None	20	87
Drowsiness	2	9
Headache	1	4

certain foods (particularly chocolate, peanut butter, some fruits, such as strawberries, and nuts). Urticaria also may accompany or follow various infections, most notably hepatitis.

The cause of chronic urticaria is difficult to identify; it may involve sensitivity to a particular food or food additive commonly eaten by the patient. A chronic, underlying disease process also may be involved; chronic infection and some myeloproliferative disorders have been found to be associated with this type of urticaria. While a psychogenic component to these attacks may be suspected, as is characteristic of cholinergic urticaria, this may be difficult to prove.

Various physical agents may cause urticaria, including cold, heat, sunlight, and ultraviolet light. While cold may aggravate asthma or vasomotor rhinitis, cold urticaria usually is found in patients who do not manifest any other known allergic tendencies. Heat sensitivity usually produces cholinergic urticaria, which appears to be caused by an unusual sensitivity to acetylcholine. Photosensitivity may be induced by a variety of topical agents, including cosmetics and drug ointments.

Regardless of the nature of urticaria, the first

symptom generally is pruritus, followed by the appearance of wheals 1 to 5 mm in diameter. Larger lesions (≥ 20 cm) may appear to be composed of rings of erythema with concomitant edema.

It has been our experience that most urticarial patients seek treatment because they observe a dramatic change in their skin. This change can be very uncomfortable, with concurrent pruritus and burning. The wheal may seem to grow rapidly and often takes on unusual geometric configurations, which may be quite frightening to the patient.

The release of histamine, normally confined to the intracellular granules of mast cells, may be mediated by a wide range of stimuli. Clemastine fumarate, the H_1 -histamine receptor antagonist, inhibits both histamine-induced capillary permeability and sensory nerve stimulation, which explains the symptomatic relief afforded patients with urticaria.

While other antihistamines are available for the treatment of urticaria (diphenhydramine, cyproheptadine), our results indicate that clemastine fumarate should be considered as the first choice to provide symptomatic relief of this condition. Topical steroid creams are of no value in the treatment of the typical urticarial lesion, which essentially is an overt manifestation of a systemic condition.

Conclusion

Our data support earlier studies,^{1,9,10} which indicate that clemastine fumarate possesses a high therapeutic index. Its low drowsiness profile and relatively long half-life make it a valuable antihistaminic agent.

REFERENCES

1. Burns RBP, Shelanski MV: Histamine wheal and flare inhibition by clemastine fumarate. *Ann Allergy* 38:339-344, 1977.
2. Sherriff JM, Wallace MG: A comparative study of clemastine ('Tavegil') and chlorpheniramine maleate in the treatment of hay fever. *Curr Med Res Opin* 4:245-249, 1976.
3. Todd G, Hopkins P, MacLay WP: Double-blind trials of clemastine ('Tavegil') in allergic rhinitis. *Curr Med Res Opin* 3:126-131, 1975.
4. Roncevic A: Allergic rhinitis and its control by antihistamines: Clinical trial of Tavegil (mecloastine). *Curr Ther Res* 11:625-633, 1969.
5. Collins IS, Morton FJ: Mecloprodin (Tavegil): A new antihistamine: Clinical trials in Australia 1966-1967. *Curr Ther Res* 10:373-380, 1968.
6. Nogrady SG, Bevan C: Inhaled antihistamines: Bronchodilatation and effects on histamine- and methacholine-induced bronchoconstriction. *Thorax* 33:700-704, 1978.
7. Nogrady SG, Hartley JPR, Handlip PDJ, et al: Bronchodilatation after inhalation of the antihistamine clemastine. *Thorax* 35:479-482, 1978.
8. Hartley JPR, Nogrady SG: Effect of an inhaled antihistamine on exercise-induced asthma. *Thorax* 35:675-679, 1980.
9. Nasemann T: Results of treatment with Tavegil in dermatology. *Med Welt* 17:2798-2800, 1966.
10. Conroy DPJ, Wallace MG: The use of clemastine ('Tavegil') administered parenterally in acute allergic episodes. *Curr Med Res Opin* 4:250-254, 1976.

Case Report

Post Tubal Ligation Syndrome Or Iatrogenic Hydrosalpinx

MARVIN G. GREGORY, M.D.

Introduction

Surgical sterilization is now the most popular method of permanent contraception for American women over 30 years of age, and at the present rate of increase will soon surpass the use of oral contraceptives for women under age 30.¹ It is estimated that 675,000 tubal ligations are performed yearly in the United States.²

Hydrosalpinx has become an extremely common finding for the pathologist. The purpose of this case report is threefold: to attempt to establish an association between the observed increase in hydrosalpinx and the phenomenal increase in surgical sterilization, to present a credible etiology for iatrogenic hydrosalpinx, and to discuss the pathogenesis of a disease process henceforth referred to as post tubal ligation syndrome.

Report of a Case

A 36-year-old white woman was admitted to Park View Hospital in Nashville, Tenn., on Jan. 7, 1981 for evaluation of continuous lower abdominal pain, abdominal pressure, and dyspareunia for several months. She has two children ages 10 and 12 years, both delivered vaginally. At age 27 abdominal tubal ligation was performed for sterilization, and vaginal hysterectomy, with anterior and posterior colporrhaphy, was done for symptomatic pelvic relaxation at age 33.

Physical examination showed tenderness without palpable masses in the pelvic adnexal areas. Laboratory studies were all within normal limits, including a pelvic sonogram which was reported as "normal pelvic ultrasound post hysterectomy." On Jan. 9, 1981, the patient underwent exploratory laparotomy, and bilateral salpingo-oophorectomy, and was found to have bilateral hydrosalpinx (Fig. 1).

Discussion

The phenomenal increase in surgical sterilization may be explained easily: the universal advantages of limiting the size of families, the removal of once existing restrictions imposed by governments, hospital administrations, and physicians, and increased ease with which the



Figure 1. Fallopian tubes and ovaries showing bilateral hydrosalpinx.

procedure can be performed (on an outpatient basis on occasion for both men and women).

Historically, hydrosalpinx has been considered an intermediary step in the process referred to as pelvic inflammatory disease.^{3(p326),4} Infection by *Neisseria gonorrhoeae* initiates an acute salpingitis. Inflammation and edema give rise to destruction of the lining epithelium with coalescence of the mucosal folds to produce tubal occlusion. Subsequent serous secretions produce dilatation of the occluded tube — hydrosalpinx — which when secondarily infected produces pyosalpinx and/or tubo-ovarian abscess.

Ironically, physiologic and anatomic alterations of the fallopian tube are considered the single most common cause of involuntary infertility, once accounting for as much as 30% to 35% of all cases.^{3(p488)}

Etiology of Iatrogenic Hydrosalpinx

The fallopian tube serves as a conduit for ascent of mobile sperm from the vagina to join with an ovum, and subsequent descent of the zygote or fertilized egg to its implantation site within the uterus.

A single layer of ciliated and secretory columnar cells forms the mucosal lining of the oviduct. Figure 2 is a schematic drawing of a normal fallopian tube. The cilia of this epithelium beat in the direction of the uterus and it is a combination of the current produced by the cilia and peristalsis of the tubal musculature which transport the fertilized egg to its implantation site within the uterus. The hydrosalpinx of pelvic inflammatory disease is, in essence, initiated by an initial insult, salpingitis, most often from *N. gonorrhoeae*. Iatrogenic hydrosalpinx is initiated by an initial insult, e.g., tubal ligation, fulguration, or application of a mechanical clip or band. Theoretically, single point interruption of a fallopian tube should produce no ill effects (Fig. 3). Secretions of the secretory cells proximal to the occlusion cannot produce hydrosalpinx because the fimbriated end of the tube is open to the peritoneal cavity. Secretions of the secretory cells distal to the occlusion cannot produce hydrosalpinx because the tube empties into the uterus and thence through the cervix and into the vagina. The popularity and success of tubal ligation attest to single point interruption of an otherwise normal fallopian tube as an innocuous procedure.

Figure 4 is a schematic drawing of the same tube shown in Figure 3, but now the tube has been insulted a second time and as a result the situation is prefatory to development of hydrosalpinx, i.e., a tube lined with secretory epithelium is closed at both ends. Secretion within this closed system will produce dilatation.

This "second" insult to the normal fallopian tube, post tubal ligation, may be any one of several: endometritis occluding the cornual portion of the tube; salpingitis, either preexisting or perhaps arising de novo from the operative procedure; so-called double-burn technique of laparoscopic tubal ligation wherein the tube is cauterized in more than one site; and perhaps the most devastating, hysterectomy with conservation of the ovaries.

In his textbook, *Hysterectomy*,⁵ Burch states, "In spite of much investigation, no hormone has ever been found in the menstruating en-

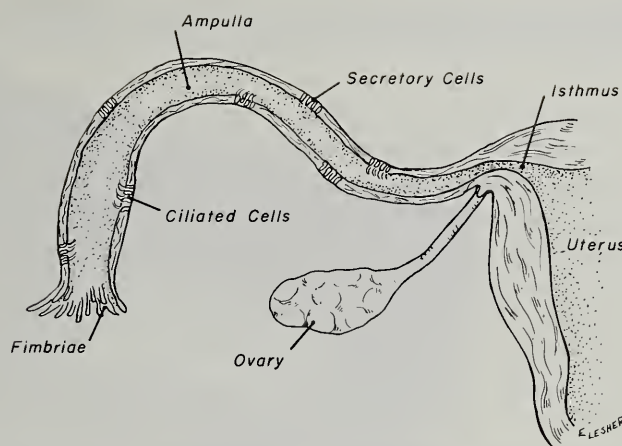


Figure 2. Schematic drawing of a normal fallopian tube showing the single layer of ciliated and secretory cell columnar epithelial lining.

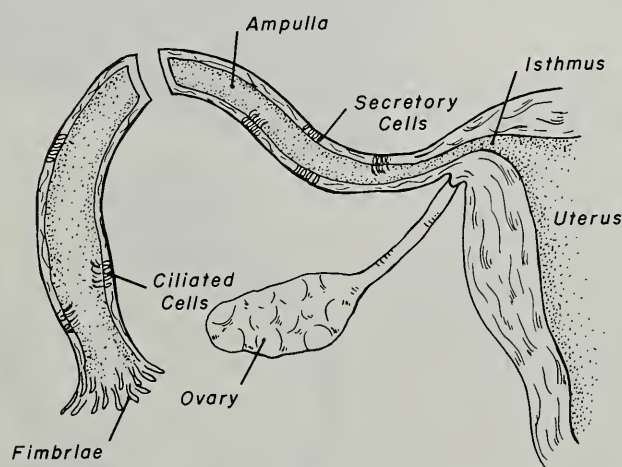


Figure 3. Schematic drawing of a fallopian tube following single point "tubal ligation."

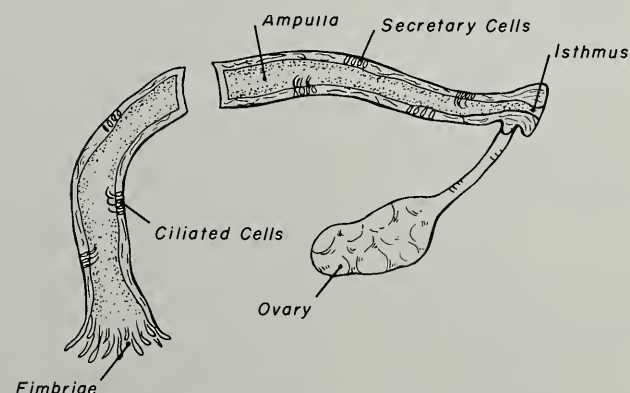


Figure 4. Schematic drawing of same tube shown in Figure 3 except now "second insult," i.e., hysterectomy with ovarian conservation, has been performed and situation is prefatory to development of iatrogenic hydrosalpinx.

dometrium, or the menstrual discharge, or the uterine musculature." Successful tubal ligation, therefore, creates a useless organ which continues to function. After tubal ligation, standard treatment for uterine dysfunction, consisting of cyclic hormone therapy, dilatation and curettage, and/or supportive care, seems pitifully inadequate when applied to a useless organ, and hysterectomy becomes an acceptable alternative.⁶ Ovarian conservation or ablation at the time of hysterectomy has been debated for years and remains controversial. To many, especially those outside of gynecology, removal of normal ovaries, and especially castration of the very young, represents the epitome of radicalism and may account for much of the so-called needless surgery. On the other hand, conservation of useless or potentially dangerous tissue is surely false economy. True conservatism should be conservation of useful function.

Pathogenesis of Post Tubal Ligation Syndrome

The symptoms of iatrogenic hydrosalpinx are *not* pathognomonic. The pain is most often described as continuous and dull, although it may also be perceived as a continuous pressure, or a bloating sensation, and may occasionally be sharp and intermittent. Sexual relations may be painful. Physical examination may reveal only a mild to moderate amount of adnexal tenderness in a patient with moderate to high pain threshold. The tube may be palpable but quite often is not (the size of the hydrosalpinx may vary from 1 cm to more than 5 cm in diameter).⁴

Perhaps the most useful diagnostic tools are a

high index of suspicion, history of previous tubal ligation, and especially history of tubal ligation followed by hysterectomy with conservation of ovarian function.

Conclusion

At this writing, tubal ligation is generally considered an acceptable operative procedure to achieve the desired purpose of surgical sterilization; hysterectomy purely for sterilization is not generally accepted, the argument being that results do not justify the morbidity and mortality of the more extensive procedure. If we are to accept tubal ligation as a legitimate procedure, as it appears we must, it should be considered as less than definitive. Should subsequent pelvic surgery be indicated, the patient should be informed of the potential hazards of future operative procedures less extensive than panhysterectomy with bilateral salpingo-oophorectomy.

Less emphasis must be placed on the pathologic evidence of gynecologic disease, and the stigma associated with removal of "normal tubes and ovaries," even in the very young, should be removed.

300-25th Ave. North
Nashville, TN 37203

REFERENCES

1. The number one birth control method worldwide. *Sexual Medicine Today* 5:11, Feb 1981.
2. Loffer FD, Pent D: Pregnancy after laparoscopic sterilization. *Obstet Gynecol* 55:643, 1980.
3. Kistner RW: *Gynecology Principles and Practice*. Chicago, Year Book Medical Publishers, Inc, 1964.
4. Soules MR: Hydrosalpinx: Restoring tubal function. *The Female Patient* 6:34-45, Feb 1981.
5. Burch JC, Lavelly HT: *Hysterectomy*. Springfield, Ill, Charles C Thomas Publisher, 1954, p 9.
6. Gregory MG: OB-G and the SVMIC. *J Tenn Med Assoc* 73:27-29, 1980.

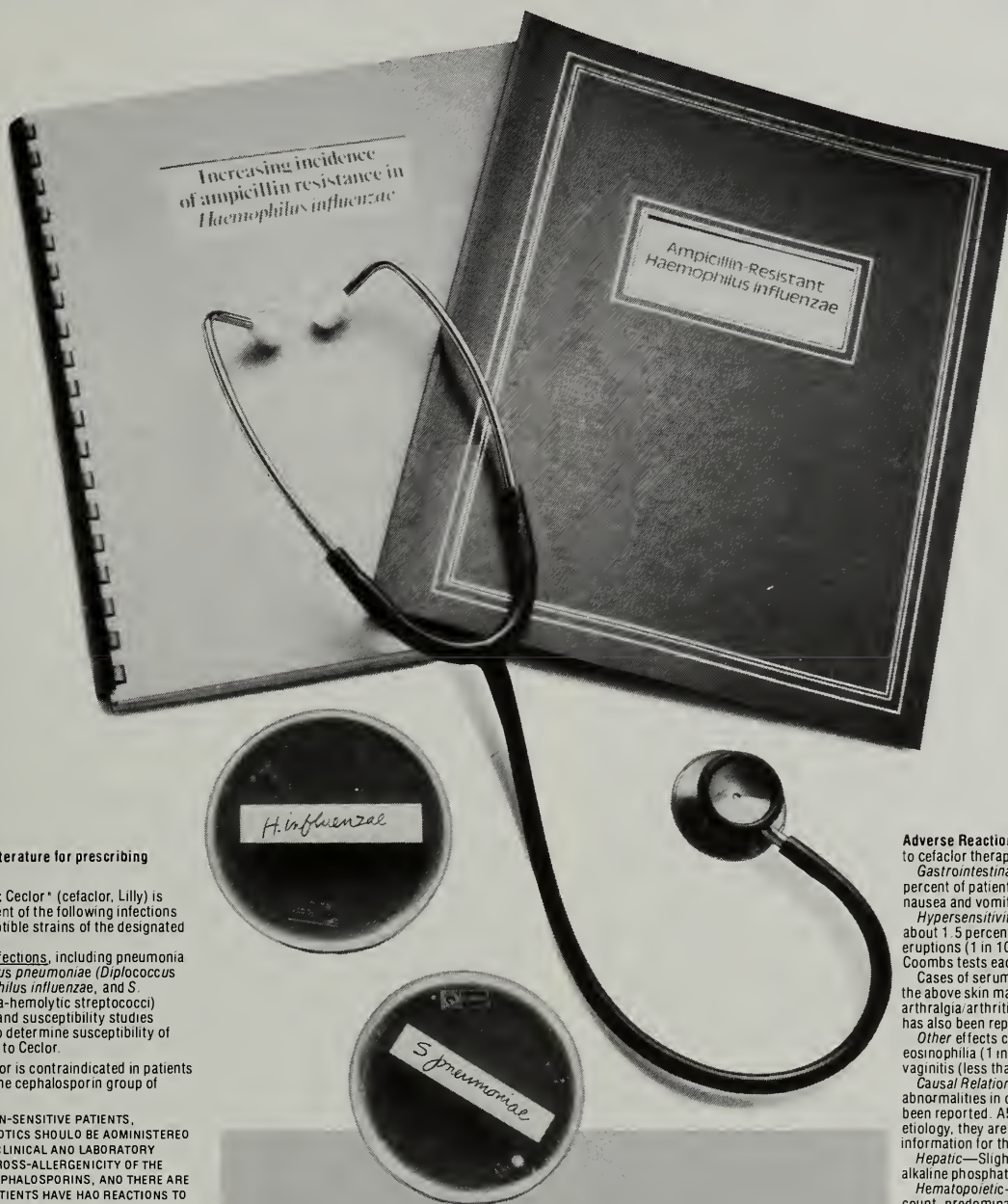
Help for Impaired Physicians

Through its Committee on Impaired Physicians, TMA helps doctors who are suffering from alcoholism, other drug addiction, psychiatric disorders or senility. The thrust of the program is rehabilitative, not punitive. The Committee is composed of physicians who have special expertise in these areas, some from personal experience. Effective treatment for these illnesses is achieved most easily when the disease is detected early and family, friends, and associates are urged to avoid misguided sympathy which enables the condition to deteriorate.

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An added complication... in the treatment of bacterial bronchitis*



Brief Summary. Consult the package literature for prescribing information.

Indications and Usage: Cefclor* (cefclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae* (*Diplococcus pneumoniae*), *Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci).

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Cefclor.

Contraindication: Cefclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS TO BOTH DRUG CLASSES (INCLUDING ANAPHYLAXIS AFTER PARENTERAL USE).

Antibiotics, including Cefclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Precautions: If an allergic reaction to cefclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of cefclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug.

Cefclor should be administered with caution in the presence of markedly impaired renal function. Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Cefclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest* tablets but not with Tes-Tape* (Glucose Enzymatic Test Strip, USP, Lilly).

Usage in Pregnancy—Although no teratogenic or antifertility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established. The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus.

Usage in Infancy—Safety of this product for use in infants less than one month of age has not been established.

Some ampicillin-resistant strains of *Haemophilus influenzae*—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Cefclor.¹⁻⁶

In clinical trials, patients with bacterial bronchitis due to susceptible strains of *Streptococcus pneumoniae*, *H. influenzae*, *S. pyogenes* (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Cefclor.⁷

Cefclor®

cefclor

Pulvules®, 250 and 500 mg

Adverse Reactions: Adverse effects considered related to cefclor therapy are uncommon and are listed below: *Gastrointestinal* symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70) and nausea and vomiting (1 in 90).

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs tests each occur in less than 1 in 200 patients.

Cases of serum-sickness-like reactions, including the above skin manifestations, fever, and arthralgia/arthritis, have been reported. Anaphylaxis has also been reported.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

[103080R]

* Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H. influenzae*.⁸

Note: Cefclor* (cefclor) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

References

1. Antimicrob. Agents Chemother., 8:91, 1975.
2. Antimicrob. Agents Chemother., 11:470, 1977.
3. Antimicrob. Agents Chemother., 13:584, 1978.
4. Antimicrob. Agents Chemother., 12:490, 1977.
5. Current Chemotherapy (edited by W. Siegenthaler and R. Luthy), II, 880. Washington, D.C.: American Society for Microbiology, 1978.
6. Antimicrob. Agents Chemother., 13:861, 1978.
7. Data on file, Eli Lilly and Company.
8. Principles and Practice of Infectious Diseases (edited by G. L. Mandell, R. G. Douglas, Jr., and J. E. Bennett), p. 487. New York: John Wiley & Sons, 1979.



Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285.

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100061

Medical Care in the '80s

Health Maintenance Organizations

MR. JOSEPH HUTTS
Senior Vice President
Western United States Operation
Hospital Corporation of America

I know that all of us are very acutely aware that the cost of health care has risen dramatically in the last few decades; and that since 1960 the real spending in the health care industry has increased some 227%. But more important, in my opinion, is the fact that health care has been representing an increasing share of our gross national product. Now, I quickly point out that this is not unique to the United States. This cost increase is happening in every industrialized country, and in most cases more rapidly than in the United States. We also need to recognize very clearly that even though we have the finest health care system in the world, in the long run we probably cannot continue to allocate an increasing share of our gross national product to health.

There are several reasons why health care costs have increased. First of all is general inflation. Second is the better and more widespread use of health insurance. Over 90% of the population now has some form of health insurance. Since patients have little out-of-pocket expense, generally they are not very sensitive to prices, and therefore have little incentive to restrict the utilization of health care. Third is new technology, which has been increasing rapidly. The net effect is that the product that we offer today has changed substantially from even a decade ago. Fourth is the aging population. Between 1965 and 1978 the number of people in the United States 19 years old and under actually decreased

while those 65 and older increased by 30%. This over 65 population is growing rapidly, and health care costs are simply much higher for older people. The last reason is reimbursement mechanisms; many of them, most notably Medicare, pay most providers on the basis of their costs providing virtually no incentive for efficiency.

As a result of these cost increases, a lot of interested groups have stimulated the development of a number of alternative means of financing and delivery, and you are familiar with these: physician group practice, ambulatory care, wellness programs, prospective reimbursement, diagnostically related groups and a number of others. All of these are important, but one additional development, the health maintenance organization (HMO), has been growing steadily and I have been asked to specifically focus on this organization.

At the outset, I want to be very clear about my personal stance on HMOs. I am not here as an advocate, but neither am I here as a critic. The staff of HCA's Center for Health Studies has spent a considerable amount of time studying HMOs and I want to share with you some of our findings and conclusions.

Like almost everyone else in this room, the management of HCA wants to understand and appropriately respond to this development. Our staff thinks that by 1980, some 20 million people, or 10% of the U.S. population, may be enrolled in some form of HMOs. This, of course, means that the vast majority will not be. I also want to be clear that my own company is not involved in HMOs in this country, although in

Presented before the Vanderbilt Medical Alumni Reunion, May 22, 1981, Nashville.

Brazil, where the dominant form of private health care delivery is through HMOs, HCA acquired a large HMO in 1979. That organization serves some 525,000 employees and dependents of some 1,100 client companies. However, with inflation in Brazil running over 100%, I sometimes think we are learning a lot more about inflation than we are about prepaid health care.

The term HMO means different things to different people, but for the purpose of this talk, I am using the definition of the U.S. Department of Health and Human Services, which is as follows:

Health maintenance organizations are organized systems of health care providing comprehensive services for enrolled members for fixed, prepaid annual fees.

HMOs are generally categorized by type of physician organization, and four general categories of prepaid plans dominate at present. First, there is the staff model. In this organization the physicians are employed directly by the HMO plan, are salaried, and usually have no patients who are not plan members. Second is the group model. In this organization a single but independent physician group contracts with the prepaid plan to provide all physician services, but continues to have its own private patients. Third is the network model. Here a number of physician groups contract individually with the prepaid plan and also maintain private patients. The last is the IPA, or individual practice association, where the prepaid plan contracts with numerous independent, solo, and group practice physicians who also continue to have their own private patients. While the physicians in the staff model are salaried, the physicians in the group, the network, and the IPA models are usually paid on a per capita or negotiated contract basis, and often in addition are given financial incentives to reduce the use of health care services.

Although a few HMOs, particularly on the West Coast, have existed for over 50 years, the real focus came in the early '70s when some people in the Nixon administration saw HMOs as a way to deal with the expansion of the health care industry and increasing health care costs. The HMO Act of 1973 was passed to provide substantial federal funding as well as federal regulation of prepaid plans. The HMO Act of 1973 proved to be too restrictive, and HMO development tapered off for a few years after the Act was passed. It was amended in 1976, and the money

amount of federal grants and funds for the developing HMOs was increased.

By the end of 1979 the federal Office of Health Maintenance Organizations had awarded a cumulative total of 493 HMO grants amounting to some \$95 million. In addition to this grant money, which was primarily for study and start up, loans were made for operational support. From 1975 through 1979 these loans totaled \$176 million. The number of prepaid plans increased from 39 in 1970 to 225 in 1980, with enrollment increasing an average of 13% per year, and the number of subscribers rose from approximately 2.8 million in 1970 to approximately 8 million in 1980.

Since the impetus for starting HMOs was the belief that they could reduce the cost of health care, I think this is a central question we should focus on, although I must admit that the data are still conflicting and confusing. Harold Luft of Stanford University is generally regarded as having done some of the best work in this area. As far as IPAs are concerned, he has concluded that there is no evidence the costs for enrollees are any lower than for people with conventional insurance. Also, from a large number of studies that have focused on the other models, the general conclusion is that the total premium costs paid by the purchasers of health care are frequently equal to or higher than traditional insurance plans. This is generally felt to be the case with HMOs because benefits are often more comprehensive, they do not often use coinsurance or deductibles, and there are added administrative costs. Even when coinsurance and deductibles are considered, we feel the data show the total out-of-pocket costs to the consumers to be about the same for HMOs and traditional insurance. Luft has concluded that while HMOs may offer lower costs at a particular time, they have not been able to alter substantially the national patterns of medical care, inflation, and increasing resource use.

The second major area to focus on is quality. Over the last few years there have been many arguments over the ways in which HMOs operate. Accusations of poor quality of care and skimping on services have been common, but there are few studies which substantiate these accusations. One point of particular concern is that HMOs may be underserving their members. The main basis for these concerns for underservice stems from the experience with Medicaid-

oriented plans in the early '70s, mainly in southern California, where the state government was trying to cut costs in a hurry. To care for Medicaid beneficiaries it apparently accepted unrealistically low bids for contracts from less than substantial enterprises and enterprises that were created primarily for the purpose of entering into these contracts. As we study HMOs, however, there does not seem to be any documented pattern of underservice.

If you stand back and look around the country you will see that many HMOs have experienced financial difficulties because they require enrollments of more than 20,000 to break even. The key to a successful operation includes an ability to market, access to capital, the ability to relate to providers, management control systems, utilization control, actuarial capabilities, and premium investment capabilities. Small organizations seem to lack many of these requirements and today a fair number of HMOs are failing. On the other hand, large organizations like Kaiser-Permanente are expanding, and several large insurance companies have entered the field, although some are contracting their involvement after an initial experience.

The Reagan administration's proposed 1982 budget significantly reduces federal support for HMOs. While President Carter's proposed 1982 budget would have provided \$35 million in grants, the Reagan administration has proposed only \$7.2 million, largely for technical support to existing plans. No grant money is requested for HMO development. This reduction in funds will probably accelerate the failure of some plans. Since 1975, 14 federally sponsored plans have failed and several more appear to be on shaky ground. These plans have generally floundered because of undercapitalization, insufficient enrollment, and poor management. The cutback in funds probably will weed out the weaker plans. The Reagan budget, however, should not be interpreted as a lack of support for the concept. This administration supports the HMO concept as a part of its overall competition approach.

It is too early to predict the ultimate development of HMOs. They may represent 10% of the market or they may represent more, but they are a part of our delivery system, and they are contributing, it seems to me, in two important ways. First, they seem to be demonstrating that they can have an impact on the way physicians practice. The gross income of physicians ac-

counts for only about 18% of our total health care spending, but all of us know that physicians control or influence most of the rest. Physicians are the primary decision-makers in the health care system. I am personally convinced most physicians are concerned about the amount and cost of health care utilized by their patients, but for whatever reason, the data seem to show that many physicians practicing in staff model HMOs particularly use less of the hospital resources for their patients and more of other services. Although some of the differences can be explained by differences in age and sex composition or occupation, previous health status, and the like in the groups being compared, many observers agree that much of the difference is real, and in fact related to physicians simply practicing differently. I personally feel this is significant.

The second area is closely related and equally important. It involves the competition that HMOs can bring to the health care scene. I think the state of Hawaii provides a good example of this. In Hawaii more than 80% of the working population and about 72% of the total civilian population receive medical care through one of two competing plans. The larger of the two plans, Hawaii Medical Service Association, is a community service organization and uses the fee-for-service method of payment typical of Blue Shield plans. In 1977 their fee-for-service traditional insurance plan covered about 484,000 people, or about 57% of the state's civilian population. The other large plan is the Kaiser-Permanente HMO program which entered Hawaii in 1968. By 1977 it had 107,000 enrolled members. There is little question that these two plans compete vigorously. More than 50,000 government employees are offered a choice of these plans and a fixed employer contribution towards the plan of their choice. Kaiser's entry into the market put pressure on the Medical Service Association to improve its benefit coverage and to strengthen its utilization and cost controls. Kaiser, in turn, found it necessary to depart from the traditional style of delivering all of its services in large medical centers and set up small outpatient clinics at locations convenient to members. Kaiser and the Hawaii Medical Service Association both report that employees and their families use hospitals at or below 400 days per thousand per year, which is well below the national average and, overall, their costs are considerably lower than the national average. The

intent of the Reagan administration is to create this kind of competition among HMOs, traditional insurance, and even self-insurance.

In summary, it adds up to this—the HMO enrollment is increasing. My own company thinks it will include about 10% of the total U.S. population by 1990. Hospital use is sometimes reduced by HMOs, and other services are utilized more. Total premium costs paid by the purchasers of health care are frequently equal to or higher than traditional insurance plans, and total out-of-pocket costs are comparable. Accusations of poor quality and underservice are not documented. Many physicians, for whatever reason, seem to practice differently in an HMO setting. HMOs can bring much needed competition to the health care scene. The reduction in federal support will weed out the weaker plans. Also, some large insurance companies have entered the field. In the long run, the HMO concept will continue to grow only if it makes a positive contribution to the health field and people recognize this.

A few months ago the Kaiser family foundation of the Kaiser-Permanente group hired the Lewis-Harris firm to study the attitude of employers who had offered HMOs to their employees. The results were interesting. Sixty-two percent of the employers said offering an HMO had no effect on the costs of health care to their firms. Fourteen percent said costs went up, and 13% said they decreased. When asked to list the main advantages of HMOs over traditional health care, the top responses were less worry about medical bills and less costly bills, having a preventive health program and regular check ups, knowing how much service will cost and paying just one fee, getting complete care in one place, and having a more comprehensive range of benefits and fuller coverage. The top disadvantages listed were, first of all, no choice of doctor or personal physician; that was the overwhelming disadvantage. Also included were the limited number of people the HMO served because of limited geographic location, impersonal service, inability to choose the hospital of choice, and concern about the quality of service. I would say that right now the employers, who represent some of the largest purchasers of health care, are very accurately and very astutely evaluating the HMO movement. I think the future is going to be extremely interesting to watch.

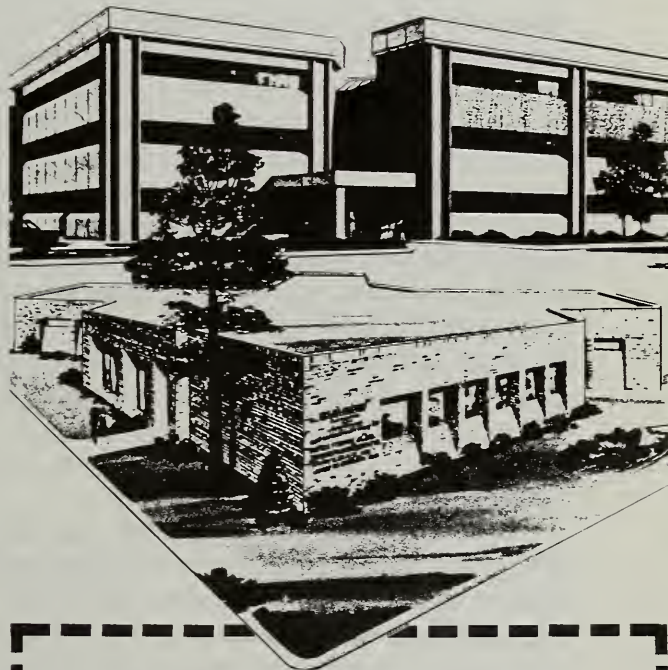
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Indications and Contraindications for Exercise Testing

Exercise testing has long provided a means to measure cardiovascular and physical fitness and was improved by the relatively recent addition of the electrocardiographic response to exertion. The Master two-step test was accepted 35 years ago but today has been replaced by the treadmill or the bicycle ergometer utilizing progression from mild to strenuous exercise. Safe protocols to be used for a progressive exercise test have been established^{1,2} and the testing of cardiac fitness, both in normal and healthy subjects and patients, has become routine. Only recently, however, have data become available which allow comparison of coronary arteriography with the results of exercise testing in substantial numbers of asymptomatic subjects. This has shown a disturbingly high prevalence of both false-positive and false-negative tests so that the value of such testing has recently been challenged.³ As a consequence, the Council on Scientific Affairs has requested several expert consultants to consider the role of the exercise test in medical practice.

Methods of Testing

Dynamic exercise for exercise testing is preferred to isometric exercise or combinations of dynamic and isometric exercise because it initiates a more predictable increase in cardiac output and ventilatory exchange, as well as in oxygen consumption. Also, the performed work load can be accurately calibrated and the physiological response more easily measured. With progressive work loads of dynamic exercise, patients with coronary artery disease (CAD) can be protected from rapidly increasing myocardial oxygen demand. Bicycling is a dynamic ex-

ercise, but in this country patients are more likely to produce the muscular effort necessary to adequately increase myocardial oxygen demand by walking or jogging on a treadmill because of their greater familiarity with this type of physical activity. The Master two-step test has limited usefulness because monitoring the ECG during exercise is difficult, and functional capacity cannot be estimated thus diminishing the information that can be derived.

Preparations for exercise testing should include the following: (1) The reason for performing the test should be clear to both patient and physician, and a written informed consent obtained. (2) The patient should not have had a meal for two to three hours prior to the test. (3) A medical history, including a careful review of medications used, and physical examination should be performed. (4) A standard resting 12 lead ECG should be taken to rule out any acute change that might indicate myocardial injury. (5) The patient should be carefully instructed in how to perform the exercise test.

Maximal or submaximal exercise can be used for testing. A clinically appropriate maximal end point occurs when the patient appears to exert a genuine total effort, or exhibits adverse symptoms or physical findings that require termination of the test. A maximum aerobic capacity has been reached when there is no increase in oxygen consumption with further increments in work load. In any test less than maximal, the estimation of functional capacity is only relatively accurate. For most applications a target heart rate is often used in spite of the wide variation of maximal expected heart rate in normals of each age group and the fact that a target heart rate according to age may be maximal for some and submaximal for other subjects.

There are many adequate protocols for treadmill or bicycle ergometer testing. The best known have been described with guidelines for their use by the Committee on Exercise of the

This is Council on Scientific Affairs Report C. This report is not intended to serve as a standard of medical care: standards of medical care which are determined locally and are constantly subject to change are established on the basis of all the several facts of the individual case.

American Heart Association.^{1,2} The following comments are pertinent to any of the accepted protocols for multistage testing.

Blood pressure should be taken at the end of each work stage or with the onset of any symptoms. The ECG should be monitored continuously on an easily seen oscilloscope and recorded at the end of each stage or with the onset of any abnormality. The time of occurrence of any findings or symptoms should be recorded. The exercise is continued according to protocol until a predetermined heart rate is achieved or until some indication for termination of the test appears. Below are listed the absolute and relative indications for terminating an exercise test.

Absolute Indications for Termination of an Exercise Test:

- Acute myocardial infarction, or suspicion thereof.
- Onset of severe angina.
- Significant drop in systolic blood pressure in spite of an increase in work load.
- Serious dysrhythmias (2nd or 3rd degree AV block, ventricular tachycardia or salvos of premature ventricular contractions).
- Signs of poor perfusion including pallor, cyanosis, or cold and clammy skin.
- Central nervous system symptoms including ataxia, vertigo, visual or gait problems, and confusion.
- Technical problems with monitoring the patient.
- Patient's request.

Relative Indications for Termination of an Exercise Test:

- Marked ECG changes from the control tracing, including more than 0.2 mV of horizontal or downsloping ST segment depression, or 0.2 mV of ST segment elevation.
- Other ST or QRS changes such as excessive junctional depression or new appearance of axis deviation or bundle block.
- Any chest pain that is increasing.
- Marked fatigue, shortness of breath.
- Wheezing.
- Leg cramps or intermittent claudication.
- Hypertensive response (systolic BP > 280, diastolic BP > 120).
- Less serious dysrhythmias, such as supraventricular tachycardia.

Maximal exercise testing is preferred to sub-

maximal testing except in certain clinical situations where the latter is safer, such as in the immediate postinfarction period. For some patients estimated to be precarious by their clinical history, it may be appropriate to stop at a submaximal level since it is not unusual for severe ECG changes and/or symptoms to occur only after exercise. If more information is required, it may be better to repeat the test later, once the patient has shown that he can safely recover from a submaximal test. All of the equipment necessary for cardiopulmonary resuscitation, including a defibrillator, oxygen and drugs, should be available in the exercise laboratory. Most problems can be avoided by closely observing the patient, frequently taking blood pressure, assessing skin appearance, and maintaining constant communication with the patient during the test.

Proper skin preparation is essential for the performance of an exercise test in order to minimize noise. The optimal number of leads to be recorded is unclear, although most ECG changes can be documented in a lateral precordial lead. Inferior leads can be misleading since they are most affected by atrial repolarization. There is an increasing tendency to record multiple leads. Many laboratories employ the 12 standard leads.

Drug effects must also be taken into account. Since digitalis glycosides can cause ST changes similar to ischemia, the patient should be off of these drugs for at least two weeks, if the test is being done for diagnostic purposes. However, if the test is being done to evaluate functional capacity for an exercise or work prescription, the patient should remain on his drug regimen.

Applications of Exercise Testing

The applications of exercise testing include the following: (1) to help diagnose chest pain etiology; (2) to help determine the prognosis and the severity of disease; (3) to help evaluate functional capacity; (4) to help evaluate treatment, both surgical and medical; (5) to evaluate dysrhythmias; (6) to determine an exercise prescription; (7) to help evaluate patients with peripheral vascular disease and with lung disease; (8) to help screen for asymptomatic CAD.

To Diagnose Chest Discomfort or Pain: The exercise test can be used to evaluate patients currently symptomatic with chest pain, patients with a past history of chest pain or patients with other findings suggestive, but not diagnostic, of CAD. The question posed to the clinician by such patients would be: is the chest discomfort or pain

due to CAD? The results of exercise testing can help establish the probability of such patients having CAD. The evaluation of the patient with chest discomfort is probably the most common use of exercise testing in clinical practice.

To Determine Prognosis: Exercise testing can be used to determine the prognosis of patients with CAD. The results of an exercise test can help to establish the risk of mortality and morbidity after an acute myocardial infarction and in patients with angina pectoris. Data support the concept that the severity of CAD is reflected by the response to exercise testing. Exercise-induced hypotension,⁴ very limited functional capacity,⁵ chronotropic incompetence,⁶ ST segment elevation,⁷ persistent marked or down-sloping ST segment depression, and ST segment depression beginning at a low heart rate all have a poor prognosis. Patients who are able to achieve a normal work load, normal maximal heart rate, and the expected increase in systolic blood pressure during treadmill testing appear to have better ventricular function and less coronary obstruction than those unable to do so. Patients with anginal chest pain induced by exercise testing also appear to have a worse prognosis than those who do not develop pain.⁸

Evaluation of Functional Capacity: Maximal oxygen consumption is the best noninvasive measurement of functional capacity, and it can either be estimated or measured directly during exercise testing. Maximal oxygen consumption can more accurately determine the degree of hemodynamic impairment than a physician's assessment of functional classification.⁹ For example, patients unable to advance beyond the first stage of the Bruce test (an oxygen consumption of approximately 18 cc O₂/kg/min) have a poor prognosis.⁵ Patients with cardiac disease often develop symptoms when their maximal oxygen consumption is less than 22 cc O₂/kg/min and usually are severely limited when their maximal oxygen consumption is 16 cc O₂/kg/min or less.¹⁰ Nonetheless, maximal oxygen consumption may have a very limited diagnostic value because of the great biological variations manifested in the population. The sensitivity and specificity of treadmill time, treadmill work load or maximal oxygen consumption have not been as carefully evaluated as that of the ST segment response to exercise testing.

Exercise testing can also be used to evaluate the effects of training. A training effect of an exercise program is manifested by a reduction in

the heart rate and systolic blood pressure achieved for a given work load.

Evaluation of Treatment: Exercise testing has been used as a means of evaluating patients who have participated in rehabilitation programs, been treated with various medications or have undergone coronary artery bypass surgery. One problem with this use of exercise testing is that when performing serial tests, patients often perform better without a change in their maximal oxygen consumption.¹⁰ This has been called the placebo effect of exercise and may be a learning adaptation rather than a true functional change.

Evaluation of Dysrhythmias: An exercise test can be used to help define or to induce dysrhythmias,¹¹ including premature ventricular contractions, sick sinus syndrome and heart block. Although ambulatory monitoring may detect a higher prevalence of dysrhythmias, including serious dysrhythmias, than does exercise testing, the clinical value of these tests may be additive.

Prescribing an Exercise Program: The results of an exercise test can be used to define the safety of participating in an exercise program or performing other activities. They are essential for formulating an individualized exercise prescription based on a person's actual maximal heart rate rather than on an estimated value. After a myocardial infarction or coronary artery bypass surgery, a patient's response to an exercise test can be used as a guide for beginning exercise rehabilitation. With careful monitoring the level of exercise tolerated can be established with acceptably low risk.

Evaluation of Patients with Miscellaneous Disease Entities: There are a number of other miscellaneous applications of exercise testing including the evaluation of exercise-induced bronchospasm, pulmonary disease, congenital heart disease, and peripheral vascular disease. Exercise testing of all patients referred to teaching and research centers for research purposes is still justified. The analysis of the response to exercise using ancillary techniques such as phonocardiography, apexcardiography, displacement cardiography, radioisotope gated imaging studies, thallium scans, echocardiography, and computer analysis of ST segment changes may increase the information from, and diagnostic accuracy of, exercise testing.³

Screening for Latent Coronary Disease: The usefulness of exercise testing in finding new cases of CAD in an asymptomatic population has recently been questioned.³ The predictability of

any test depends upon its sensitivity, specificity, and the prevalence of disease in the group under study. Because of the relatively high percentage of false-positive exercise tests in the healthy population, as well as false-negative tests in patients with symptomatic CAD, the value of the test has come under attack. There seems to be little purpose in subjecting healthy young asymptomatic subjects to this test in the expectation of making a definitive diagnosis. Because the prevalence of CAD is much lower in women than in men under 60, this is particularly true in women.

It can still be argued that the exercise test should be used to screen asymptomatic individuals in order to identify a group at high risk for developing CAD.¹² Prospective epidemiological studies have screened asymptomatic men with exercise tests and demonstrated that those with an abnormal test have 10 to 15 times the chance of developing CAD manifestations than those with a normal test.

Diagnostic Value of Exercise Testing

In order to make a probability statement regarding the presence or absence of CAD in a patient after an exercise test, it is essential to know the sensitivity and specificity of the test. Sensitivity is the percentage of patients with significant CAD who have abnormal exercise tests. In studies with angiographic correlation and in those with epidemiological end points, sensitivity has been found to be approximately 60% to 75%. Specificity is the percentage of patients without CAD who have normal exercise tests and this has been found to be about 90%. Various conditions alter specificity including resting nonspecific ST and T wave abnormalities, mitral valve prolapse, and vasoregulatory abnormality.¹² The studies substantiating the sensitivity and specificity of exercise testing have been largely based on ST segment depression. Considering other exercise test results can alter these percentages.

The information most important to the clinician is the likelihood of the patient having disease once the test result is known. Bayes' theorem states that the likelihood that a patient with a positive test will have the disease being sought for will depend on the prevalence of the disease in the population being tested. A clinician often does this intuitively when he suspects as a false result the abnormal exercise test of a 30-year-old woman with sharp, stabbing chest

pain, but considers the abnormal response in a 60-year-old man with dull chest pain to be a true result.

Angiographic studies have shown that a patient with typical angina pectoris has a high probability (90% or greater) of having significant CAD.^{5,8} The exercise test does not alter this probability very much, and so it is not essential for diagnosis; however, it may help determine the severity or prognosis of disease in such a patient. In the patient with atypical chest pain or other cardiac findings where the probability of CAD may be 50%, a positive exercise test can sharply increase the probability of disease. In this case, the test can have its greatest diagnostic impact.

Contraindications for Exercise Testing

Below are listed the absolute and relative contraindications to performing an exercise test. Most of these involve good clinical judgment. While most of the absolute contraindications are straightforward, in selected cases, despite the presence of relative contraindications, testing may provide valuable information even when performed submaximally.

Absolute Contraindications to Exercise Testing:

- Any recent change in the resting ECG suggesting the possibility of acute myocardial infarction or ischemia.
- Unstable angina.
- Serious cardiac dysrhythmias (e.g., ventricular tachycardia, 3rd degree AV block, or uncontrolled atrial fibrillation or tachycardia).
- Acute pericarditis or myocarditis.
- Endocarditis.
- Severe aortic or mitral stenosis.
- Severe left ventricular dysfunction.
- Acute pulmonary embolus or pulmonary infarction.
- Any acute or serious noncardiac disorder.
- Severe physical handicap.

Relative Contraindications to Exercise Testing:

- Any noncardiac disorder less serious than above.
- Physical handicap of a milder degree than above.
- Debilitation.
- Anemia or high fever.
- AV conduction defects.
- Untreated sustained hypertension.
- Pulmonary hypertension.
- Tachy or brady dysrhythmias, less than seri-

ous.

- Moderate valvular heart disease.
- Obstructive cardiomyopathy and other serious heart disease.
- Drug toxicity.
- Electrolyte abnormalities.
- Fixed-rate artificial pacemaker.
- Left main coronary artery obstruction or its equivalent.
- Psychiatric disease or inability to cooperate.

Interpretation of Exercise Test Results

Exercise test results can be thought of as being objective and subjective. Under the category of objective results are included (1) functional capacity, (2) heart rate and blood pressure response, (3) dysrhythmias, (4) ECG abnormalities.

Functional capacity can be estimated from the maximal work load performed. Low functional capacity suggests a poor prognosis despite any mode of therapy. Fall in systolic blood pressure with increasing work load, particularly when occurring with chest pain, is an ominous finding consistent with ischemic left ventricular dysfunction. Exercise-induced ventricular dysrhythmias are not as predictive as ST segment changes, but can identify a subgroup of coronary patients with a bad prognosis. The portions of the ECG affected by exercise that should be considered include (1) the ST segment, (2) U waves, and (3) R waves. ST segment depression is the most sensitive of these markers. The most accepted abnormality is 0.1 mV or more of horizontal or downward sloping ST segment depression lasting at least 80 msec after QRS end (the J point). Horizontal or upsloping ST segment depressions suggest a much less certain indication of myocardial ischemia. There are other criteria, but they are even less well-documented. ST segment elevation is a rare finding, but may be more ominous than depression. Inversion of U waves in a lateral precordial lead is an insensitive marker for CAD, but seems to identify severe disease. R wave changes continue to be controversial and do not appear to have the independent prognostic power of the ST segment. The normal response, however, is to decrease R wave amplitude at heart rates greater than 140. When R wave amplitude increases, CAD is suggested.

Subjective results include (1) the patient's appearance, (2) symptoms, and (3) physical findings. If the patient develops a gallop rhythm, murmurs, ventricular dyskinesia or cardiac en-

largement with exercise, the test may be considered abnormal. Reproduction of atypical chest pain may not help in diagnosis; but if classical ischemic chest pain occurs, the probability of CAD is very high even when that is the only finding.^{1,6,8,11,12}

Conclusions

The multistage exercise test, maximal and submaximal, has many medical indications.

1. It may confirm the diagnosis of CAD in patients with questionable chest pain or other abnormalities.
2. It may help in gauging the severity, and hence the prognosis, of known CAD.
3. It provides a measure of functional capacity, and this assists the physician in the exercise or work prescription and in evaluating the effect of treatment and rehabilitation.
4. It can help evaluate the presence and significance of certain dysrhythmias.
5. It probably has little indication in the routine screening of the healthy population as a case-finding device, but it may provide a useful indication of CAD prevalence in epidemiological studies of middle-aged men.

REFERENCES

1. Kattus AA, Brock LL, Bruce RA, et al: *Exercise Testing and Training of Apparently Healthy Individuals*. A Handbook for Physicians. New York, The Committee on Exercise, American Heart Association, 1972.
2. Kattus AA, Brock LL, Bruce RA, et al: *Exercise Testing and Training of Individuals with Heart Disease or at High Risk for Its Development*. A Handbook for Physicians. New York, The Committee on Exercise, American Heart Association, 1975.
3. Epstein SE: Value and limitations of the electrocardiographic response to exercise in the assessment of patients with coronary artery disease. *Am J Cardiol* 42:667, 1978.
4. Morris SN, Phillips JF, Jordan JW, et al: Incidence and significance of decreases in systolic blood pressure during graded treadmill exercise testing. *Am J Cardiol* 41:221, 1978.
5. Bruce RA: Exercise testing for evaluation of ventricular function. *N Engl J Med* 296:671, 1977.
6. Ellestad MH, Wan MK: *Stress Testing—Principles and Practice*. Philadelphia, F. A. Davis Company, 1975.
7. Chahine RA, Raizner AE, Ishimori T: The clinical significance of exercise-induced ST-segment elevation. *Circulation* 54:209, 1976.
8. Weiner DA, Ryan TJ, McCade CH, et al: Exercise stress testing. Correlations among history of angina, ST-segment response and prevalence of coronary artery disease in the coronary artery surgery study (CASS). *N Engl J Med* 301:320, 1979.
9. Patterson J, Naughton J, Pietras R, et al: Treadmill exercise in assessment of the functional capacity of patients with cardiac disease. *Am J Cardiol* 30:757, 1972.
10. Froelicher VF, Brammel H, Davis G, et al: A comparison of the reproducibility and physiologic response to three treadmill protocols. *Chest* 65:512, 1974.
11. Goldschlager N, Selzer A, Cohn K: Treadmill stress tests as indicators of presence and severity of coronary artery disease. *Ann Intern Med* 85:277, 1976.
12. Froelicher VF: Screening asymptomatic men for coronary disease. *Ann Rev Med* 28:1, 1977.

Maternal Serum Alpha-Fetoprotein Screening

Introduction

In January 1980, the Council on Scientific Affairs was presented a number of issues regarding maternal serum alpha-fetoprotein (AFP) testing in detection of open neural tube defects (spina bifida cystica, encephalocele, and anencephaly). The Council identified several scientific questions regarding the appropriate use of the test and discussed medicine's concern over the U.S. Food and Drug Administration's (FDA) announced intent to strictly regulate AFP testing. A panel of expert consultants was gathered to advise the Council on this subject.

The concern about the FDA's imminent involvement stemmed from statements made by that agency that it was going to propose regulations pursuant to its statutory authority under the 1976 Medical Device Amendments to the Federal Food, Drug, and Cosmetic Act, specifically the "restricted device" provisions,¹ for the ostensible purpose of gathering more data on the "safety and efficacy" of the test. The proposed FDA regulations are consistent with the 1979 report of the American College of Obstetricians and Gynecologists (ACOG) and the American Academy of Pediatrics (AAP) Alpha-Fetoprotein Task Force.

The ACOG/AAP Task Force group, which also included participants from the Office of Maternal and Child Health and representatives of the FDA, made many specific recommendations in conjunction with "guidelines" that raise serious questions that must concern physicians troubled by regulatory intervention in medical practice. The mandated medical practice, in this case, would be established by the FDA when it completes the administrative machinery to implement and codify into law the recommendations and the guidelines of the task force.

The task force guidelines involve limiting the use of AFP test kits to a carefully monitored laboratory and physician-user system in order to gather more data on (1) the incidence of elevated maternal serum AFP levels in various popula-

tions in this country, and (2) the utilization of follow-up diagnostic techniques [and the incidence of spontaneously aborted pregnancies] when AFP test results are positive.

Stating that "there is no precedent in the United States for a mass disease detection program that requires the coordination of so many disparate elements of the health care system, as in AFP screening, (the task force suggested that) maternal serum AFP screening should be implemented initially only where it can be done within a coordinated system of care which contains the requisite resources and facilities to provide proper safeguards and potential for follow through."² In areas of the United States that could not assure such coordination or did not have the requisite resources, AFP screening would not be available.

If the task force recommendations were issued as regulations by the FDA, AFP assays would be restricted to federally "certified," high-volume laboratories which would be a part of a larger network for AFP screening and follow-up. It is expected that specific requirements for the "certification" of such laboratories would be established by the FDA, access to reagents would be limited to "certified" laboratories, patient selection criteria would be established by the FDA, and physicians' credentials for participation in a comprehensive testing program would be spelled out by the FDA. Also, it is anticipated that physicians would be required to "certify that they will cooperate with the established [AFP screening] center in the geographic area."²

Regulatory requirements for the obtaining of informed consent, the forwarding of data on pregnancy outcome, the timing of blood samples, and the protocol to be followed after obtaining a positive test result would all be specified in detail by the FDA. Finally, FDA-approved "program coordinators" at testing centers would be required to permit FDA inspections, maintain and make available medical records, and provide quarterly and annual reports to manufacturers.

Laboratories certified to participate in AFP screening would be required to use only FDA-

¹This is Council on Scientific Affairs Report I.

approved kits, test only samples submitted by physicians who had agreed in writing to participate in the mandatory diagnostic protocol, follow all product label recommendations, submit to inspections and proficiency testing programs conducted by a government entity (probably the FDA or the Center for Disease Control), maintain (specified) separate patient and test result records, make all data available to the Center's AFP program coordinator, and submit an IDE (Investigational Device Exemption) application for all nonapproved AFP reagents. In sum, the draft regulations detail a system by which the FDA would limit distribution of commercial AFP test kits, control nonapproved laboratory prepared reagents, and mandate the collection and reporting of data by physicians and laboratories "certified" pursuant to FDA criteria.

In the course of its deliberations concerning AFP testing—deliberations regarding the safety and effectiveness of the technology, as well as the impact of the imminent rules—the AMA panel was primarily concerned with the scientific and medical questions regarding AFP screening. Nonetheless, the panel felt that the scope of the proposed restrictions on the sale, distribution, and practitioner's use of the test must be considered to the extent that it reflected the FDA's intent to invoke the full measure of its authority to establish conditions of medical practice as a *quid pro quo* for approving the release of a controversial new medical device and technology.

Alpha-Fetoprotein Determination

AFP is a glycoprotein that resembles albumin. It is made initially by the yolk sac and then by the fetal liver. The level of AFP in *fetal serum* rises rapidly through the 13th week, when it becomes the principal serum protein, and then declines steadily throughout the rest of gestation. It is normally excreted via the fetal urine into the amniotic fluid, whence it diffuses into the maternal serum.

AFP is found in healthy adults in detectable levels only during pregnancy. In pregnancy the level in *maternal serum* rises from undetectable amounts to a median peak of 20 microgram percent at 32 weeks of gestation. In a normal pregnancy, during the critical testing period, 15 to 20 weeks of gestation, the level of AFP in the *amniotic fluid* decreases by one third whereas the maternal serum level increases about three times.³ At the time when initial testing is recom-

mended (16 weeks of gestation) the amniotic fluid level of AFP is approximately 500 times, and the fetal serum level is approximately 100,000 times, that found in maternal serum.⁴ Radioimmunoassays, whether developed by individual laboratories or in the form of test kits, when used with appropriate quality controls, have been found to be sufficiently accurate and reliable for measurement of even the microgram percent concentrations found in the maternal serum.

Elevated levels in a nonpregnant adult indicate an abnormality. To date, this elevation has been associated with hepatic carcinoma, hepatoblastoma, nonseminomatous testicular tumors, yolk sac tumors of the ovary, and rarely other upper GI tract tumors.

In the pregnant female a certain degree of elevation is normal. However, when the level increases more than approximately 2.5 times the expected median, at 16 to 18 weeks, there exists a significant possibility of an open fetal neural tube defect (NTD), anencephaly or spina bifida.

Other factors that may cause abnormal elevation of maternal serum levels in a normal pregnancy include twinning, underestimation of gestational age, or laboratory error. In addition, amniotic fluid elevation may be caused by fetal blood contamination.

Though the most common abnormality causing AFP elevation in the pregnant woman is a fetal NTD, there are a number of other developmental defects that have also been associated with elevated AFP levels and should be considered: fetal death, spontaneous abortion, Rh disease, hydrocephalus, omphalocele, duodenal atresia, congenital nephrosis, cystic hygroma, Turner's syndrome, multiple hypospadias, pilonidal sinus. The incidence of high serum AFP levels with most of these diagnoses is not yet known.

The usefulness of a screening test is directly related to the predictive value of a positive test (PVPT)—the percentage of individuals with a positive test who in fact have the disease for which they are being screened. This in turn depends on the sensitivity (the percentage of affected individuals with a positive test), the specificity (the percentage of unaffected individuals with a negative test), and the prevalence in the population being screened.

Because the distribution of AFP serum levels from normal and abnormal pregnancies overlap, one must choose a level which optimizes the

PVPT by changes in sensitivity and specificity. Most investigators have chosen a value of 2.5 to 3.0 times the median. This value falls between the 95th and 98th percentile in most series of data. A set of average values for maternal serum AFP screening in the United States suggests a sensitivity of 90%, specificity 95% and incidence 0.2%. The PVPT then calculates out to be 3.5%.

Multistage Testing Procedure

Because the PVPT for a single maternal serum test only allows telling the patient that the probability of having an NTD is one in 30, further testing needs to be carried out. The following table demonstrates the sequence of tests that most investigators follow and also is the one recommended in the ACOG/AAP Task Force Report. The numbers on the right (as calculated from the task force assessment) indicate the probability of having an NTD after having a positive test and the percent of the screened group remaining who are considered a risk.

	PVPT	Risk group as % of total
Prior to any testing	0.2%	100%
After first elevated serum test	3.5%	5%
After second elevated serum test	5%	3.5%
After sonography	5%	1.7%
After amniocentesis	95%	.1%

Sonography

After the second positive serum test, sonography is recommended to corroborate gestational age (biparietal diameter and other sonographic techniques), exclude twins, evaluate the viability of the fetus, and detect anencephaly. Approximately 50% of those who have a sonogram will be found to have other explanations for the maternal serum AFP elevation. Of this group 50% will have revised gestational age, 40% will have multiple pregnancies, 10% will have intrauterine fetal death. At the same time, 3% will have anencephalic fetuses.

At this stage, sonography will eliminate half of the women from the group at risk. However, because anencephalics constitute approximately 50% of open NTDs, only half of the open NTDs remain undetected. Therefore, the percentage of the at-risk group with fetal NTDs remains the same, as shown by the PVPT holding at 5%.

Some clinicians have suggested that the use of detailed ultrasonography following amniocen-

tesis become routine when there is a high amniotic fluid AFP. Detailed ultrasonography can demonstrate the location and severity of the lesion. This obviously would be vital information in predicting the likely clinical outcome of an uninterrupted pregnancy.

Ultrasonography is being used increasingly in obstetrical care, especially in determination of gestational age. Frequently, determination of gestational age within plus or minus two weeks is adequate for good care. However, the critical nature of the gestational age in AFP screening requires an even greater precision of the machinery and skill of the sonographer. These requirements increase significantly when performing detailed ultrasonography to determine the location and severity of the lesions. It has been estimated that at the present time there are a limited number of diagnostic centers in the United States that possess the optimal machinery and skills required for this.⁵

Amniocentesis

In order to reach a large enough PVPT to be generally acceptable in determining whether to terminate pregnancy, an amniocentesis must be performed. Evaluation of the amniotic fluid requires a radioimmunoassay with a specificity of between .995 and .999 to obtain a PVPT of 90% to 98% respectively. This is obtainable with the presently used test kits.

Amniocentesis entails two types of risks. The first is the possible contamination of the amniotic fluid with fetal blood and the second is abortion or fetal loss attributable to amniocentesis. Because of the high levels of AFP in fetal serum, slight contamination of the samples can lead to erroneous test results. This requires that quality control measures on the part of the laboratory include a test for hemoglobin in the amniotic fluid.

Most studies have reported a fetal loss attributed to amniocentesis between 0.5% and 1.5%, although some have reported higher rates. If all pregnant women in the United States were screened by serum AFP testing, then every year amniocentesis would be recommended for 51,000 (1.7% of 3 million) women in order to detect 2,300 defective fetuses. If 1% is assumed for the unintended fetal loss associated with amniocentesis, then 51,000 amniocenteses would cause the loss of approximately 500 normal fetuses.

Although sonography should detect almost all

anencephalics, survival of these fetuses is universally poor and the need for the screening program is not clear-cut. The benefit in the case of fetuses with spina bifida is even less clear-cut. For example, if one assumes that all women with a positive amniotic fluid AFP test will choose to terminate the pregnancy (and assuming a specificity of .995), then the intended to unintended fetal loss will be about 4.5:1. If only 25% of affected fetuses will have a severe enough spina bifida to warrant termination of pregnancy, then the ratio of intended to unintended fetal loss will approach 1:1. How well detailed ultrasonography will be able to predict the severity of the impairment prior to the decision to continue with the pregnancy remains to be determined.

The unintended fetal loss is not the only negative consequence of AFP screening. The psychological stress that the patient with a false-positive serum test must undergo, before the final outcome of sonography amniocentesis and abortion is known, is difficult to measure; but it should not be ignored. The proposed protocol would require that about 25 mothers would have to undergo this stress for every single NTD aborted. The panel questioned seriously whether the psychological burden of these patients, when added to the unintended fetal loss, is a fair trade-off for the benefits of such a screening program.

High-Risk Pregnancies

Patients may be placed in a "high-risk" category because of previously affected children or parents. In the vast majority of cases there has been one previous child. There is a recurrence rate of 5% for the pregnant woman who has previously had an NTD fetus. Therefore, the PVPT for this group is 5% prior to any testing. Because of this, many investigators recommend starting the testing in this group with a sonogram guided amniocentesis.

It is apparent that a crucial consideration in the use of AFP screening is the prevalence of fetal NTDs in the group being screened. Although .20% is probably a reasonable average for the United States there are at least fourfold variations between the large U.S. subpopulations. Whereas black and Jewish populations have a rate between .08% and .10%, whites in Atlanta have a prevalence of .26% and the Boston Irish rate is .32%. In the United Kingdom, where most of the studies to date have been conducted, the overall prevalence is double that in the United States.

Ethical and Legal Issues

Finally, the rationing of medical care by the proposed mechanism raises many other questions. For the women who might wish to interrupt a pregnancy that had one chance in 20 of being even mildly abnormal, is it fair to withhold a serum test if she is in the wrong medical catchment area or to make her continue on with the prolonged and expensive testing that the protocol demands when interruption of pregnancy could settle the issue? The AMA has maintained since 1974 that patients have a right "to be free of coercion in determining when they will submit to the performance of elective medical procedures such as sterilization and abortion." Such determination should be made with all the facts known, including the level of likelihood that an abnormal fetus may be present. Also, the legal liability on the physician in attendance when an NTD fetus is delivered will weigh most heavily should he have refused to perform a requested maternal serum AFP test.

Conclusions and Recommendations

After reviewing the ACOG/AAP Task Force work and other available data, the panel agreed generally with the guidelines set out in the Task Force Report. The use of AFP testing as a screen for NTDs does require good coordination of multiple services. There is a need for high-quality medical and laboratory work, timely genetic counseling, experienced personnel for follow-up testing, including sonography and amniocentesis, and for abortion services.

The panel concluded that maternal serum AFP screening of all pregnant women should not be advocated at this time. Expanded pilot studies are needed to determine the efficacy of such a program. These expanded pilot studies could be carried out under existing research protocols. *When and if the test kit is released, the panel stated that it need not require a departure from the usual laboratory proficiency testing and medical peer review mechanisms that have been established to assure appropriate medical follow-up with other new and important screening programs.*

The panel concluded that AFP screening of all pregnant women should not be advocated at this time. However, it stated that the individual physician should have the prerogative to employ the test in the course of counseling those high-

(Continued on page 740)

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References: 1. Citations available on request from Merrell Dow Pharmaceuticals Inc., Cincinnati, Ohio 45215. 2. Hoekenga M T et al: A comprehensive review of diethylpropion hydrochloride. In Central Mechanisms of Anorectic Drugs, S. Garattini and R. Samanin, Ed., New York. Raven Press, 1978, pp. 391-404.

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INDICATION: Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

CONTRAINDICATIONS: Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly. When central nervous system active agents are used, consideration must always be given to the possibility of adverse interactions with alcohol. *Drug Dependence:* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy:* Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children:* Tenuate is not recommended for use in children under 12 years of age.

PRECAUTIONS: Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdose. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

ADVERSE REACTIONS: *Cardiovascular:* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System:* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache; rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal:* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic:* Urticaria, rash, ecchymosis, erythema. *Endocrine:* Impotence, changes in libido, gynecostasia, menstrual upset. *Hematopoietic System:* Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous:* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

DOSAGE AND ADMINISTRATION: Tenuate (diethylpropion hydrochloride): One 25 mg. tablet three times daily, one hour before meals, and in mid-evening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg. tablet daily, swallowed whole, in mid-morning. Tenuate is not recommended for use in children under 12 years of age.

OVERDOSAGE: Manifestations of acute overdose include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phentolamine (Regitine[®]) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdose.

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Cesarean Childbirth

A National Institutes of Health Consensus Development Conference, held at NIH Sept. 22-24, 1980, addressed issues that have arisen concerning cesarean childbirth.

The rising cesarean birth rate is a matter of concern. The consensus statement reflects the judgment that this trend of rising cesarean birth rates may be stopped and perhaps reversed, while continuing to make improvements in maternal and fetal outcomes, the goal of clinical obstetrics today. The constructive steps that may be taken and goals for further research are recorded herein.

Why and how have cesarean delivery rates changed in the United States and elsewhere, and how have these changes affected pregnancy outcome?

Many factors have been cited to account for the increase in cesarean birth rates. In the 1960s, coinciding with the decline in the overall birth rate, increasing emphasis was placed on the health of the fetus. With couples having fewer children, even greater attention was given to favorable pregnancy outcome. There were societal demands for prevention of death of the fetus and neonate and for improvement in the quality of life for the survivors. The nation's infant mortality rate was used as an international yardstick of the quality of health care, and great emphasis was placed on improving infant survival. Advances in medical care—such as improved anesthetic techniques, blood products and blood transfusions; wider choice of antibiotics for treatment of infection; and better medical control of maternal illnesses such as

diabetes, hypertension, and heart disease—all made maternal mortality from cesarean childbirth a rare occurrence. The safer the procedure became, the easier it became to make a decision to perform the operation. Thus, cesarean delivery was one approach applied to try to improve fetal outcome.

Studies suggesting that cesarean birth improved the outcomes of various complications of pregnancy led to increased use of cesarean delivery for certain conditions. Obstetricians came to favor surgical relief of abnormal fetal presentations that formerly required a difficult forceps or other manipulative delivery. The diagnosis of dystocia was made more frequently and more often managed by cesarean delivery. Episodes of fetal distress during labor, more quickly detected by electronic fetal monitoring, were frequently managed by cesarean birth. As the primary cesarean rate rose due to more frequent surgical intervention for these complications, the long-held tenet stating "once a cesarean, always a cesarean" led to a rapid increase in the number of repeat cesarean births as these women delivered subsequent pregnancies.

Some observers have suggested that the cesarean rate has been affected by other factors, such as defensive medicine, financial incentives, and the trend toward specialization in obstetric practice. Moreover, concern has been voiced about the degree to which patterns of residency training have perpetuated the trend. No reliable data exist to assess the extent to which any of these factors may have contributed to the rise in cesarean delivery rate.

Epidemiologic Data

During the 1970s, the cesarean birth rate in the United States increased about threefold, from 5.5% in 1970 to 15.2% in 1978, and appears to be continuing to increase. This trend is pervasive, affecting hospitals and patients in all parts of the country.

An increase in cesarean rates is also evident internationally. The Canadian rate has most closely paralleled that of the United States, moving from 7.5% in 1972-1973 to 13.9% in 1979. In western European nations, cesarean delivery rates are considerably lower than in Canada and the United States; however, a trend toward an increase in cesarean delivery is reported in France, England, Norway, and the Netherlands. Other than the increase in Norway between 1975 and 1978, the United States has experienced the sharpest increase.

Concurrent with the rise in cesarean delivery rates is an international trend toward greater reliance on

This conference was sponsored by the National Institute of Child Health and Human Development, in conjunction with the National Center for Health Care Technology and with the assistance of the Office for Medical Applications of Research, NIH. Copies of the full report of the task force, containing a description and analysis of the literature and data on which this statement is based, may be obtained from the Office of Research Reporting, NICHD, Bldg. 31, Room 2A34, NIH, 9000 Rockville Pike, Bethesda, MD 20205.

Editor's Note: The lengthy discussion on the composition of the panel and task force, the process of arriving at its conclusions, and its strengths and weaknesses have been deleted. For this information, you should write to the address above for the complete report.

medical specialists for management of childbirth. This includes more deliveries performed by obstetricians as compared with general practitioners or midwives, and better access to a full complement of hospital resources.

In the United States, the diagnostic categories having the largest effect on the increase in the cesarean birth rate between 1970 and 1978 are:

Indication	% of All Cesareans Done for this Indication (1978)	% Contribution to Rise in Rate
Dystocia	31%	30%
Repeat cesarean	31%	25-30%
Breech presentation	12%	10-15%
Fetal Distress	5%	10-15%

The cesarean birth experience in New York City, an area for which data from birth and death certificates are available to assess changes in methods of delivery from 1968-1977, is consistent with the national data. In addition, along with the rise in cesarean births, there is a trend away from forceps delivery.

Low birth weight is associated with relatively high rates for primary cesarean birth. However, because more than 90% of all infants weigh over 2,500 gm at birth, the normal birth weight group makes the largest contribution to the number of cesarean births.

The rate of increase in primary cesarean birth in New York City over the decade was similar at almost all birth weights. The incidence of low birth weight decreased both overall and among cesarean births. These changes in incidence of low birth weight run counter to the upward trend in cesarean birth rates.

Neonatal mortality decreased markedly in New York City between 1967-1968 and 1976-1977. The largest decrease occurred in the group of infants weighing 1,000 to 2,500 gm. In this group, both primary cesarean and vaginal births had large decreases in neonatal mortality. These decreases may have been influenced by concomitant improvements in factors such as neonatal intensive care. In births above 2,500 gm there was a small decrease in neonatal mortality. No decrease is found in neonatal mortality among all primary cesarean births when allowing for shifts that may have occurred from forceps to cesarean delivery.

What is the evidence that cesarean delivery improves the outcome of various complications of pregnancy?

Dystocia

The term dystocia encompasses two systems of classification of abnormal labor. The first relates to problems of fetal position or size. The second is less well-defined and includes functional classification of labor with a fetus in the vertex position. The largest contribution (30%) to the overall rise in the cesarean delivery rate from 1970 to 1978 came from the diag-

nostic category of dystocia. Almost all of this contribution is accounted for by the increased frequency of the diagnosis of dystocia. In the New York City data, the diagnosis of dystocia is concentrated among infants with birth weights over 2,500 gm, and cesarean delivery is not associated with survival advantage in this group when compared with vaginal births. Adequate data relating to infant morbidity, and specifically abnormal neurologic development, in association with dystocia are unavailable.

Problems of fetal position and size (fetopelvic disproportion) are generally easily recognized, appropriate guidelines for obstetrical conduct in these situations are available, and fetal and maternal outcome effects are reasonably well known. These problems, excluding the breech birth which is discussed as a separate category, are not a major reason for the increase in cesarean birth rates in the dystocia category.

The functional classification of labor as dystocia with a fetus in vertex presentation is more complex. The ability of the fetus weighing less than 1,000 gm to tolerate vaginal or cesarean birth has not been adequately evaluated. Similarly, the fetus weighing more than 4,000 gm, when recognized, requires particularly cautious obstetrical management of labor. The remainder of vertex births (over 90%) are of normal size fetuses.

Recommendations

1. In the absence of fetal distress, management of dysfunctional labor may include such measures as patient rest, hydration, ambulation, sedation, and use of oxytocin, prior to considering cesarean birth.

2. There is a compelling reason to examine the diagnostic category of dystocia because of its prominent association with the increase in primary cesarean birth rate and the absence of a survival advantage for the cesarean births over 2,500 gm.

3. Included among approaches to the issue of dystocia should be (a) peer review within hospitals, (b) examination of the efficacy of methods for assessing the progress of labor, with specific attention to infant and maternal mortality and morbidity, and (c) research clarifying the factors which affect the progress of labor including the effects of emotional support, ambulation, rest, sedation, and oxytocin stimulation.

Repeat Cesarean Delivery

Prior cesarean delivery is one of the two major reasons cited for cesarean birth at this time, and is likely to increase further if present trends continue. This diagnostic category accounted for 25% to 30% of the increase in cesarean rate from 1970 to 1978.

Following a cesarean delivery, more than 98% of women in the United States undergo a repeat cesarean for any subsequent pregnancy. This practice began in the early 1900s to avoid the risk of uterine rupture at the scar site during labor. At that time the "classical" cesarean incision (a vertical incision in the body of the

uterus) predominated, and the cesarean birth rate was extremely low. The incidence of scar rupture is higher in the classical, low vertical, and inverted T incisions, compared with the low segment transverse incision. Following an initial cesarean birth and during subsequent pregnancies and labors, the low segment transverse uterine incision now in general use is associated with lower maternal and fetal morbidity and mortality. With any uterine scar, however, rupture is unpredictable.

Based on maternal and neonatal mortality rates, the practice of routine repeat cesarean birth is open to question. Repeat cesarean carries two times the risk for maternal mortality of vaginal delivery, and the maternal mortality rate for repeat cesarean has not fallen since 1970. At birth weights below 2,500 gm, the New York City data show a consistent neonatal mortality disadvantage for cesarean as compared with vaginal births; at birth weights above 2,500 gm, cesarean deliveries have the same mortality rates as vaginal births. Data from national and international sources suggest that labor and vaginal delivery after a previous low segment transverse cesarean birth is of low risk to mother and fetus in properly selected cases.

Recommendations

1. In hospitals with appropriate facilities, services, and staff for prompt emergency cesarean birth, a proper selection of cases should permit a safe trial of labor and vaginal delivery for women who have had a previous low segment transverse cesarean birth. Informed consent should be obtained before a trial of labor is attempted.

2. No changes in present practices are recommended for delivery by elective repeat cesarean of patients who have had a previous classical, inverted T, or low vertical incision, or for whom there is no documentation of the site and type of the previous cesarean incision.

3. In hospitals without appropriate facilities, services, and staff, the risk of a trial of labor in women who have had a previous cesarean may exceed the risk for both mother and infant from a properly timed, elective repeat cesarean birth. Patients should be informed in advance of the limits of a particular institution's capabilities and of the availability of other institutions capable of offering this service, so that they may make a choice.

4. More adequate information is needed on risks and benefits in trials of labor for patients with previous low segment transverse uterine incisions. Studies designed to provide this information must be of sufficient sample size and include morbidity and mortality information on both mother and infant.

5. Institutions offering trials of labor following a low segment transverse cesarean birth should develop guidelines for the management of those labors.

6. Patient education relating to cesarean birth and repeat cesarean birth should continue throughout

pregnancy as an important part of patient participation in decisions concerning anesthesia, elective repeat cesarean birth, or trial of labor following previous cesarean birth.

Breech Presentation

Breech presentation is associated with an increase in both morbidity and mortality when compared with vertex presentation, irrespective of whether delivery is vaginal or cesarean. There is a continuing trend toward delivery of infants in breech presentation by cesarean. Nationally the proportion of breech presentations delivered by cesarean rose from 11.6% in 1970 to 60.1% in 1978, accounting for about 10% to 15% of the rise in cesarean rate during those years.

In the New York City data, among breech presentations, there is no consistent difference in neonatal mortality at low birth weights (2,500 gm or less) between primary cesarean births and vaginal breech deliveries. But, at mature birth weights, breech-presenting infants delivered by cesarean have a fivefold better neonatal mortality rate than those delivered vaginally. The strong qualification, however, is that at birth weights above 2,500 gm there has been no overall decrease in mortality over a ten-year period for the total group of breech presentations (vaginal and cesarean combined). This seeming contradiction may reflect a shift of the better risk breech births from the vaginal delivery group to the cesarean birth category. Further exploration of the effect of changes in mode of delivery would require information on infant morbidity and development, not now available.

Evaluation of outcome in breech presentation is complicated by problems related to the increased frequency of prematurity in breech presentations, the different types of breech presentation, congenital anomalies associated with breech presentation, and influence of maternal pelvic size and fetal size on ease of vaginal breech delivery. Maternal morbidity following surgery or difficult breech delivery is a consideration in choosing the method of delivery. Most clinical reviews suggest that abdominal breech delivery may be associated with less risk to the premature fetus, but lack of data on infant morbidity prevents a firm conclusion.

The large fetus presenting as breech, the fetus presenting as a complete or footling breech, and the fetus with marked hyperextension of the head presenting as breech, have a better outcome if delivered by cesarean birth.

Recommendations

1. Vaginal delivery of the term breech should remain an acceptable obstetrical choice for delivery when the following conditions are present: (a) anticipated fetal weight of less than 8 lb; (b) normal pelvic dimensions and architecture; (c) frank breech presentation without a hyperextended head; and (d) de-

livery to be conducted by a physician experienced in vaginal breech delivery.

2. Data are insufficient to make a firm recommendation on the preferable method of delivery for the low birth weight (less than 2,500 gm) fetus in the breech presentation.

3. More data should be collected to evaluate the best mode of delivery for fetuses in the breech presentation.

4. Because all breech births have inherent risks that are often uncertain and unpredictable, this information should be shared with the family whenever possible as part of the decision-making process.

Fetal Distress

Asphyxia during labor, that may lead to brain damage, is the most dangerous clinical correlate of fetal distress. Fetal distress ranks third in importance, along with breech presentation, in the rise of cesarean birth rates, accounting for about 10% to 15% of the increase. While evidence is lacking that the actual incidence of fetal distress has changed, the diagnosis of fetal distress has been made more frequently during the past ten years. The use of electronic fetal monitoring is associated with an increased frequency of diagnosis of fetal distress. The diagnosis of fetal distress occurs most frequently in fetuses weighing over 2,500 gm. Fetal distress cannot be reliably explored within the New York City data for risk of mortality in relation to method of delivery because the actual number of affected infants is small.

Recommendation

Further studies are needed to improve the accuracy of the diagnosis of fetal distress, and to develop new techniques for making the diagnosis. These advances may be expected to improve fetal outcome and to lower cesarean birth rates.

Other Maternal and Fetal Considerations

Because of a need for early delivery, many maternal and fetal medical problems lead to cesarean birth. Examples include maternal diabetes, pregnancy-induced hypertension, and erythroblastosis fetalis. This entire group contributes only a small part of the cesarean birth rate increase.

Recommendation

If vaginal delivery is to be used in this group, an effective method is needed to stimulate preterm labor safely.

What are the medical and psychological effects of cesarean delivery on the mother, infant, and family?

Maternal Mortality and Morbidity

Although overall maternal mortality is extremely uncommon (9.9 deaths/100,000 births in 1978), ce-

sarean birth carries two to four times the risk for mortality when compared with vaginal delivery. Some maternal mortality following cesarean birth is related to maternal illness rather than to the surgery. Maternal mortality rates are still underreported.

Cesarean birth is a major surgical procedure with morbidity greater than vaginal delivery. Infections constitute the greatest portion of this morbidity. The most common infections are endometritis and urinary tract and wound infections. Morbidity may reflect the demographic features of the population cared for, as well as the events of labor and birth.

Recommendations

1. Better data collection is needed to identify the reasons for operative and nonoperative maternal deaths.

2. The National Center for Health Statistics should consider revising (1) the standard certificates of birth and fetal death to include items that distinguish between cesarean and vaginal delivery, and (2) the standard certificates of death to include or modify items that improve the identification of maternal deaths. State health departments should adopt similar revisions in certificates of birth and death, and a uniform definition of maternal death.

3. For statistical analysis, maternal death certificates should be matched with the corresponding birth and fetal death certificates.

4. Comprehensive studies of morbidity with respect to cesarean births, vaginal births and forceps births are needed.

5. Delivery of medical care to patients undergoing cesarean birth should be made equal to that available to general surgical patients.

Anesthesia

Obstetric anesthesia is unique in that it requires attention to the health of at least two patients. Maternal deaths related to anesthesia, although infrequent, continue to occur. Most anesthesia-related deaths are potentially avoidable. Appropriate anesthetic selection and technique can minimize the inherent medical risks, including the risk of maternal death. There is considerable variation and room for improvement in the number, quality, and availability of obstetric anesthesia services throughout the United States.

Recommendations

1. Choices for the kind of anesthesia should be available and discussed among patient, obstetrician, and anesthesiologist. In particular, where not medically contraindicated, the patient should have the option of receiving regional anesthesia.

2. More comprehensive and continuing data collection is needed to determine the training, availability, and quality of anesthesia support systems and personnel for the obstetric patient.

3. Further study of the effects of obstetric anes-

thetia on maternal mortality and morbidity and the physiology and conduct of labor is required.

4. The short- and long-term effects of anesthetic drugs and techniques on the neurobehavioral development of the newborn are poorly described in the existing literature. Understanding these effects is critical to an evaluation of benefits and risks to infant development, and they warrant further study.

Neonatal Respiratory Distress Syndrome

Cesarean birth, particularly in the absence of labor, appears to be associated with an increase in neonatal respiratory distress at all gestational ages. Iatrogenic neonatal respiratory distress due to premature termination of pregnancy should be avoidable by appropriate antenatal use of clinical, biophysical, and biochemical estimators of gestational age. Among fetuses with lungs previously demonstrated as mature, postnatal respiratory distress is unlikely to be a problem, whatever the route chosen for their delivery.

Recommendations

1. Continuing efforts to avoid iatrogenic prematurity are needed. There must be improvement in professional and patient education regarding the necessity for safe and effective antenatal assessment of gestational age and fetal maturity before elective intervention in labor and delivery.

2. Further studies are needed of the influence on neonatal pulmonary function of events surrounding labor and delivery.

Psychological and Developmental Effects

There is limited research concerning the psychological impact on parents following a cesarean birth. Nevertheless, surgery is clearly an increased psychological and physical burden when compared with a normal vaginal delivery. In addition, negative responses from mother and father have been reported in the available retrospective studies. In some hospitals, family centered maternity care has been extended to the cesarean birth family, and in these cases there is no evidence of harm to mother, neonate, or father. The presence of fathers in the operating room and closer contact between mother and neonate appear to improve the post-cesarean behavioral responses of the families. One consistent finding from small scale studies of post-cesarean birth families is the greater involvement of fathers with their infants. Improved educational programs for all families so that they may understand the cesarean birth, and specific educational programs for previous cesarean birth families, are methods to improve the birth experience.

Comparative studies of the influence of cesarean birth on infant development often lack a statement on the obstetrical indications for cesarean birth or whether the father was present in the delivery room. Several studies have noted that, although the infant delivered by cesarean has usually received more

medication than a control infant delivered vaginally, assessments of neonatal behavior did not reveal depressive effects. Virtually no differences associated with delivery mode have been found in the few reports available on infant development beyond the neonatal period. The published studies in this field are often inadequate in study design and incomplete in infant follow-up.

Recommendations

1. Parent education during pregnancy by health care providers and in childbirth education classes should include information relating to the possibility of a cesarean birth, an explanation of the technical procedures surrounding the cesarean birth, and discussion of choices available to parents.

2. During labor and at the time a decision to perform a cesarean is made, as time and circumstances permit, a discussion of the indications, procedures, and parental options should take place between the physician or his/her staff and the parents.

3. Information exchange about the entire cesarean birth experience should continue in the postoperative period and at later postpartum visits.

4. In the absence of scientific evidence regarding benefit or risk, the presence at a cesarean birth of the father or surrogate should represent a joint decision among parents, physician, and hospital representatives.

5. Hospitals are encouraged to liberalize their policies concerning the option of having the father or surrogate attend the cesarean birth.

6. The healthy neonate should not be separated routinely from mother and father following delivery.

7. There is a need for longitudinal developmental follow-up studies of infants and their parents. These studies should include study populations of sufficient size for meaningful statistical analysis, suitable control groups, and standardized methods of assessment.

What economic factors are associated with cesarean births?

The medical cost of delivery by cesarean birth is generally higher than that of vaginal delivery. The available evidence does not permit a precise assessment of the value of health care resources that would be saved by avoiding a cesarean birth.

These additional medical costs can only be assessed in relation to their benefits to both infant and mother. At present, information on benefits, particularly those relating to morbidity and development of the infant, is inadequate to allow their comparison with cost.

Historically, financial incentives to patients both for and against cesarean delivery have existed. In women lacking health insurance, an additional financial burden is imposed by the cesarean birth. Conversely, the structure of many employer-sponsored health insurance plans, where coverage of normal de-

liveries has been limited, has given financial advantages to the cesarean birth. This latter incentive is disappearing due to a 1979 change in civil rights legislation. Evidence on the effect of these incentives on cesarean birth rates is insufficient.

Financial incentives to physicians both for and against the performance of cesarean birth may exist. In some cases, the higher fee paid for cesarean delivery may not be justified by greater effort or time. In other situations, e.g., in the case of family practitioners who must refer patients to a specialist for cesarean delivery, incentives against a cesarean birth may exist. Evidence on the effects of physician incentives on cesarean birth rates is limited and conflicting at present.

Recommendations

1. Although it would be useful to know how the medical benefits of cesarean birth compare with its costs in various situations, until these benefits can be better defined and measured, no recommendation can be made to conduct economic evaluations to address this issue.

2. Research is needed into the nature of economic incentives for and against cesarean birth and into the effect of these incentives on the behavior of physicians and patients.

What legal and ethical considerations are involved in decisions on cesarean delivery?

Legal Concerns

Malpractice suits may be brought against a physician for negligent performance of a cesarean, for not performing a necessary cesarean, or for performing an unnecessary cesarean. Of major concern is the malpractice suit for negligent nonperformance of an allegedly necessary cesarean. The physician defendant is successful in most of these cases. Liability, when found, generally involves gross deviation from the recognized standards of patient care. Appropriate application of the doctrine of informed consent by providing a patient sufficient information to make a knowledgeable treatment choice is protective for the physician. The law also deems the rights of the unborn child worthy of protection. Although commonly cited, there is no evidence that fear of litigation and the possible consequent practice of defensive medicine is a major cause of the increased cesarean birth rate.

Recommendations

1. The courts should recognize that if a vaginal delivery resulted in a "less than perfect" baby, this does not necessarily mean that the physician was negligent for not performing a cesarean birth.

2. Physicians should make a determination as to the need for a cesarean delivery based solely on sound

medical judgment.

3. Physicians should support the patient's right to participate in the decision-making process concerning whether to have a cesarean by proper application of the doctrine of informed consent.

Ethical Concerns

The ethical principles associated with cesarean birth are generally not specific to this procedure. They correspond to established patterns governing relationships between health care providers and their patients. They are consistent with providers' traditional commitment to giving patients' interests priority over their own; they acknowledge the right of patients to make informed decisions regarding their own bodies, including the right of proxy consent; they recognize the independent rights of the unborn relative to those of the mother; and they take into account the special needs and concerns of teaching institutions and the ethical difficulties involved in achieving distribution equity in health care.

Recommendation

Further studies are needed to discover whether the increase in cesarean delivery rates in fact represents a violation of any of these general principles.

Research Needs

Throughout this consensus statement, recommendations appear for the development of new data and research studies. The task force has found at all stages of its assessment of problems and issues related to cesarean childbirth that evidence to reach hard conclusions often is not available. In part, this may be due to the complexity of the subject; in part it may be due to the lag in developing information that identifies the critical questions needing intensive investigations. The epidemiologic analysis of the national and New York City experiences has clarified many of these issues. There is a need for data similar to New York City's for other population groups. However, it is urgent that studies that have the potential for more effectively answering questions concerning the reasons for and efficacy of cesarean birth be conducted. This will require a range of different methodologies, including well-designed medical record-based sources of information, interview surveys, case control studies and randomized clinical trials.

Randomized clinical trials are difficult, time consuming, and expensive. However, in certain circumstances, they offer the only way to address problems definitively. The question of ethics is often raised as an obstacle to the conduct of randomized trials for procedures or managements which are already routine, whether or not they are established. However, failure to conduct feasible randomized trials in the case of clinical practices whose efficacy is not established and is being persuasively challenged, raise ethical issues of greater concern.

Another area of necessary research focus is that of physician practice. The effects of medical training, hospital policy, and ethical and legal concerns on the choice of delivery procedure are currently unexamined subjects deserving greater scrutiny by means of a combination of epidemiological, economic, and

social science methods.

Most issues of pivotal importance concerning cesarean birth will require longitudinal infant evaluation. Such studies are expensive and logistically difficult, but they should be regarded by funding agencies as high priority areas.

Maternal Serum Alpha-Fetoprotein Screening...

(Continued from page 728)

risk patients who have a previous familial history of NTDs and to use it in other selective populations where a high prevalence rate of the detectable defects is known to exist.

The panel noted the collateral concerns of interested parties in the resolution of moral and ethical imperatives, but stated that such concerns should be explicitly addressed in a context apart from FDA's evaluation of the safety and efficacy of the device.

With regard to scientific questions, therefore, the Council on Scientific Affairs recommends that the AMA encourage the development of a carefully planned educational program on AFP testing and prenatal counseling for both physi-

cians and patients. The creation of this educational program and the dissemination of related information should be undertaken in cooperation with other organizations of health care professionals, the leadership of appropriate consumer groups, the Food and Drug Administration and other appropriate governmental agencies.

REFERENCES

1. Federal Food, Drug and Cosmetic Act, section 520(e).
2. ACOG/AAP Alpha-Fetoprotein Task Force Report, Aug 3, 1979.
3. Crandall BF, et al: Maternal serum screening and prenatal diagnosis. *Pediatr Clin North Am*, vol 25, no 3, August 1978.
4. Wang PY, et al: Evaluation of four "kit" immunoassay methods for determination of alpha-fetoprotein in serum during pregnancy. *Clin Chem*, vol 25, no 11, 1979.
5. Hobbins JC: Verbal communication, presented at National Conference on Maternal Serum Alpha-Fetoprotein, Washington, DC, July 1980.

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Chronic Granulocytic Leukemia With Thrombocytosis; The Hypercoagulability States

CHARLES E. KOSSMANN, M.D., Editor

WILLIAM S. HUBBARD, M.D.:

A 48-year-old black woman with chronic granulocytic leukemia (CGL) since 1970 was treated intermittently with busulfan with a decrease in the WBCs from 181,000/cu mm to 3,000/cu mm. Because of a rising platelet count melphalan was begun in 1970 with only temporary success, and there was a subsequent rise of platelets to approximately 1,000,000/cu mm. Later treatment with ³²P for a phase platelet count of approximately 2,000,000/cu mm gave a slight decrease in these elements.

She was seen just prior to the present admission with an episode of clumsiness, numbness, and tingling in her left hand which completely resolved in four hours. There was no change in speech or vision and no previous history of a transient ischemic attack or cerebrovascular accident.

On admission the blood pressure was 118/70 mm Hg, pulse rate 84/min and regular, respirations 22/min, temperature 100.5 F. She was well developed and slightly obese, in no acute distress, alert, and well oriented. The fundi were benign. The liver measured 20 cm in the midclavicular line and the spleen was 3 cm below the left costal margin. The neurological examination was normal.

The hematocrit was 22%, the phase platelet count 2,600,000/cu mm, and the WBC count 31,000/cu mm. The peripheral smear showed marked thrombocytosis, with many large cells, occasional blasts, and progranulocytes. The RBCs were slightly hypochromatic with moderate poikilocytosis.

The patient was started on dipyridamole and aspirin and transfused with 2 units of packed RBCs. Her temperature varied between 100 F and 102 F but blood and urine cultures were negative. The fever was thought most likely due to extensive periodontal disease, for which oral penicillin V, 500 mg every six hours, was prescribed empirically.

She was given 3 mCi of ³²P intravenously to combat the thrombocytosis. The hematocrit was stable at 25% and the platelet count at 1,800,000/cu mm; the WBC count was 6,000/cu mm. She was discharged with a temperature of 100 F.

The final diagnosis was chronic granulocytic leukemia with thrombocytosis.

CAROLYN M. CHESNEY, M.D.:

I will focus on the particular combination of problems presented by this patient but will begin

with a general discussion of the hypercoagulability state.

Venous thrombosis usually occurs as an isolated event without an obvious cause. One possibility to be considered is a hypercoagulability state, particularly in situations where there is recurrent thrombosis or thrombosis at an unusual site. Today's patient appeared to have a transient ischemic attack, a neurological problem that could be the result of hypercoagulability due to a platelet abnormality. I will review some of the more common disease entities related to thrombosis, the tests one can do to diagnose the so-called hypercoagulability state, and the sort of therapy that might be indicated.

Entities Associated With the Hypercoagulability State

Some common pathologic states associated with thrombosis include antithrombin III deficiency, hyperaggregable platelets, disseminated intravascular coagulation (DIC), thrombocytosis, paroxysmal nocturnal hemoglobinuria, malignancy, cryofibrinogenemia, polycythemia vera, and other myeloproliferative syndromes such as CGL. With any of these, there is a much higher incidence of thrombosis than is seen in the population at large.

Antithrombin III Deficiency

Let us focus briefly on antithrombin III deficiency, a topic which deserves a whole session by itself. Antithrombin III is the most important physiologic inhibitor of thrombin found in the body, and is the protein that accounts for the anticoagulant effect of heparin. Deficiency of antithrombin III can be acquired or congenital. Homozygous cases have not been described, perhaps because they are lethal, but heterozygous examples have been reported in several large kindreds. One extensive study by Marciniak and colleagues¹ revealed a large kindred,

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Presented Oct. 29, 1980.

many of whom had had histories of recurrent phlebitis, thromboses at various sites, and pulmonary emboli. From these and similar studies it has been learned that when the acquired or congenital antithrombin III level is 75% or less of the normal there is a high risk of thrombosis. For unknown reasons, even in the kindreds with the most severe clinical manifestations, thrombosis has not been reported to occur under 10 years of age. Difficulties are not encountered until the teens even when the abnormality is congenital. The acquired form has been reported in various situations such as estrogen contraception and cirrhosis.

Coumadin or coumarin anticoagulants are effective therapy for patients with antithrombin III deficiency. Of course, fresh frozen plasma and whole blood also contain antithrombin III and in an acute situation, as in active thrombosis or DIC, where the antithrombin III is being utilized rapidly, a transfusion with fresh frozen plasma may be required to replace it. The increased utilization during active thrombosis may explain the sometimes insignificant prolongation of the partial thromboplastin time with therapeutic doses of heparin. Antithrombin III must be present for heparin to exert its anticoagulant effect.

The Hyperaggregable Platelet

The platelet-vessel wall interaction appears to be of particular importance in arterial thrombosis; the role of platelets in venous thrombosis is more controversial, although some evidence is accumulating that there is some role for the platelet in venous thrombosis and that hyperaggregable platelets may in fact predispose patients to such clotting. In one study of 28 patients with venous thrombosis, the platelet survival time was shortened in 18.² From this it can be inferred that there was a rapid platelet turnover because platelets were being utilized at the site of the thrombosis. In another study there was a significant amount of spontaneous platelet aggregation in 14 of 30 patients.² This means the platelets aggregated in the aggregometer without addition of an aggregating agent, a phenomenon not normally seen. In one study about half of the patients demonstrated this spontaneous *in vitro* aggregation as well as *in vivo* circulating platelet aggregates as measured by the platelet aggregate ratio, an indicator of the tendency for platelets to form aggregates *in vivo*. This test differs from the standard platelet aggregation in several ways, so that it is not surprising to find that sometimes

the results of these two tests do not agree.

In the standard platelet aggregation test, blood is collected into the anticoagulant, centrifuged to obtain platelet-rich plasma, and studied in an aggregometer with agents such as adenosine diphosphate (ADP), epinephrine, or collagen. In this test there is a lag of about an hour between the time the platelets have left the body until they are studied. The platelet aggregate ratio is a much simpler sort of test. It requires 1 ml of whole blood which must be carefully collected. One half is placed in buffered ethylenediamine-tetracetic acid (EDTA) and the other half in buffered EDTA containing formalin. The formalin fixes any platelet aggregates present at the time of venipuncture, while aggregates in the tube containing only buffer will disaggregate. The tubes are gently centrifuged to remove aggregates, and platelet counts are made. A ratio of the formalin/buffer counts is calculated. Normally this ratio is 0.8 to 1.0.³ Ratios of less than 0.8 are consistent with an increase in the number of circulating aggregates or of aggregates formed at the time of venipuncture. This test is a reflection of what is going on at the time of venipuncture. It is being done routinely with the test for platelet aggregation.

The platelet aggregate ratio has been reported to be low in deep vein thrombosis,² in myocardial infarction,⁴ and in transient ischemic attacks.⁵ Other studies have focused on platelet aggregation only. For instance, patients with type II hyperbetalipoproteinemia, who have early evidence of atherosclerosis and increased morbidity and mortality, have been shown to have hyperactive platelets. The platelets of these patients aggregate and release intracellular components with a much smaller dose of ADP, epinephrine, or collagen than normal platelets.⁶ Hypersensitive platelets have also been documented in diabetes mellitus.⁷ As can be seen from these studies there is evidence that platelets are overactive in certain disease states and that there are several ways of looking at this hyperactivity.

Disseminated Intravascular Coagulation

Despite the fact that the major clinical manifestation is bleeding, DIC is basically a hypercoagulability state. The underlying abnormality is the generation of excess thrombin. The predominant clinical manifestation is bleeding, because the generation of thrombin triggers a com-

(Continued on page 745)

Exercise in Insulin-Dependent Diabetes

Brent Gooch, M.D. (research fellow in endocrinology, Vanderbilt Diabetes Research and Training Center): The patient for discussion is a 35-year-old man with insulin-dependent diabetes of approximately 20 years. He is in good general health and has had no serious diabetic complications or hospitalizations. His dosages of insulin are 20 units NPH and 5 units regular in the morning and 15 units NPH and 5 units regular in the evening. He enjoys playing golf frequently, but partway through a typical round he develops hypoglycemia, manifested by blurred vision, mild confusion, and failure of concentration. His golfing companions make no attempt to help him because of the betting on the golf scores. He eats two ham sandwiches before playing and three to four Milky Way candy bars during the round. He promptly improves when he drinks two glasses of orange juice after completing 18 holes.

During muscular exercise it is necessary for the liver to produce more glucose in order to provide more glucose to the skeletal muscles. The main signal to the liver is provided by increased catecholamines, while a slight increase in cortisol and glucagon also occur. In the normal individual, insulin levels decrease during exercise, permitting more hepatic glucose output. In uncontrolled diabetes catecholamines may hyperrespond, and blood catecholamine levels may be higher than during the equivalent amount of exercise in nondiabetics or well-controlled diabetics.

Alan L. Graber, M.D. (endocrinologist, St. Thomas Hospital): What is the mechanism for this exaggerated response in catecholamine secretion in uncontrolled diabetics?

Rodney Lorenz, M.D. (pediatric endocrinologist and clinical director, Vanderbilt Diabetes Research and Training Center): It is probably the same type of situation which results in exaggerated growth hormone response to

some stimuli and exaggerated glucagon secretion in uncontrolled diabetes.

Dr. Gooch: The response of the diabetic's blood sugar during exercise is at least partially related to his level immediately preceding exercise. If the plasma glucose is over 300 mg/dl, available insulin is negligible, and despite greater muscular glucose utilization, there is a huge outpouring of glucose from the liver, which results in a sharp increase of plasma glucose levels. In the uncontrolled diabetic this is accompanied by exaggerated ketosis. When the plasma glucose is below 300 mg/dl at the beginning of exercise, the plasma glucose usually falls during exercise if insulin has previously been injected into a subcutaneous depot. This happens because the liver continues to be insulinized, even when more glucose is needed by the exercising muscles. If the subcutaneous insulin injection has been given in the leg, the fall in the plasma glucose is greater than if the injection had been in the arm.

In recent studies we have found that if insulin is infused at a constant rate either intravenously, subcutaneously, or intraperitoneally, there is very little change in plasma glucose during mild exercise in patients with insulin-dependent diabetes mellitus. Using continuous subcutaneous insulin infusion (CSII) with an insulin pump, we were able to produce normal or near-normal levels of fasting plasma glucose (FPG) with basal infusion rates of 0.5 to 0.83 units/hr. The patients then exercised on a stationary bicycle for 60 minutes, keeping their heart rates about 120/min. This duration and degree of exercise resulted in only a trivial decline in plasma glucose levels in normal individuals, i.e., from 85 mg/dl to 73 mg/dl. In four patients who continued this basal subcutaneous insulin infusion, the plasma glucose fell only from 129 mg/dl to 116 mg/dl, similar to that in the nondiabetic individual, but in sharp contrast to the exaggerated fall seen in patients with previously injected depot insulin.

Dr. Graber: Does that mean that patients wearing insulin pumps should continue their insulin infusion during exercise, or would it be

The Diabetes Clinical Care Conference at St. Thomas Hospital, Nashville, Tenn., a collaborative educational program of the St. Thomas Department of Hospital Education and the Vanderbilt Diabetes Research and Training Center, is edited by Alan L. Graber, M.D.

better to disconnect the pump and allow the insulin levels to fall, as it would in a nondiabetic?

Dr. Gooch: We are studying that problem now, but from these preliminary data it appears unnecessary to stop this slow basal insulin infusion during exercise of this degree and duration.

Dr. Graber: Diabetic patients participate in exercise varying in intensity from just walking to marathon running. From the data you presented earlier it appears that the level of plasma glucose just before exercise is one of the most important variables determining whether hypoglycemia or hyperglycemia will occur. This is a very important practical point. In addition, if the preexercise plasma glucose is normal or only slightly elevated, these data seem to indicate that con-

tinuous insulin infusion by pump is safer than conventional subcutaneous injections in preventing exercise-induced hypoglycemia.

Dr. Gooch: If insulin has previously been injected as a depot, and then its absorption is increased during exercise, the inappropriately high level of plasma insulin is what results in hypoglycemia.

SUGGESTED READING

1. Berger M, Berchtold P, Cüppers HJ, et al: Metabolic and hormonal effects of muscular exercise in juvenile type diabetes. *Diabetologia* 13:355-365, 1977.
2. Vranic M, Berger M: Exercise and diabetes mellitus. *Diabetes* 28:147-163, 1979.
3. Conference on diabetes and exercise. *Diabetes* 28 (suppl 1): 1-113, 1979.
4. Koivisto VA, Felig P: Effects of leg exercise on insulin absorption in diabetic patients. *N Engl J Med* 298:79-83, 1978.

Medical Grand Rounds...

(Continued from page 743)

pensatory fibrinolysis which is better for the patient than a generalized thrombosis of his vascular tree! It is common, however, to see at necropsy microthrombi in small vessels.

The Myeloproliferative Syndromes

The myeloproliferative syndromes is the category in which the patient today fits. Thrombosis is common in these syndromes. A significant number of patients with polycythemia vera have thrombosis in which not only coagulation factors and platelets but also viscosity and elevated hematocrit contribute to morbidity and mortality. When the hematocrit goes above 53% or so, the patients have more problems with thrombosis. Abnormalities of platelet function in polycythemia vera fall into three groups.⁸ One group has a normal platelet count and normal platelet function; a second may have a normal or elevated platelet count and actually display bleeding and hypofunctional platelets, particularly when tested with epinephrine; the third group has thrombosis and hypersensitive platelets with a normal or elevated platelet count. These categories of abnormalities are not restricted to polycythemia vera but may be seen in other myeloproliferative disorders such as myelofibrosis, primary thrombocythemia, and CGL.

Today's patient had CGL. In addition, she had thrombocytosis with a platelet count greater than 1,000,000/cu mm, presumably a component of the CGL. Her presenting symptom was a tran-

sient ischemic attack (TIA). We have discussed the association of abnormalities of platelet function with TIA and have mentioned that a subset of patients with myeloproliferative syndromes have hyperactive platelets. In addition to the CGL, the thrombocytosis could by itself predispose to thrombotic events, particularly when the count exceeds 1 million. We have circumstantial information to implicate the patient's platelets. It would have been helpful to know her platelet function, bleeding time, platelet aggregation with ADP, epinephrine, and collagen, the platelet aggregate ratio, and the amount of spontaneous aggregation. Demonstration of hypersensitivity or some other abnormalities of platelets would have provided a rationale for treatment with antiplatelet drugs. The thrombocytosis might be brought under control with myelosuppressive agents such as busulfan.

REFERENCES

1. Marciniak E, Farley CH, DeSimohe PA: Familial thrombosis due to antithrombin III deficiency. *Blood* 43:219-230, 1974.
2. Wu KK, Barnes RW, Hoak JC: Platelet hyperaggregability in idiopathic recurrent deep vein thrombosis. *Circulation* 53:687-691, 1976.
3. Wu KK, Hoak JC: A new method for the quantitative detection of platelet aggregates in patients with arterial insufficiency. *Lancet* 2:924-926, 1974.
4. Mehta P, Mehta J: Platelet function studies in coronary artery disease. *Am J Cardiol* 43:757-760, 1979.
5. Wu KK, Hoak JC: Increased platelet aggregates in patients with transient ischemic attacks. *Stroke* 6:521-524, 1975.
6. Carvalho ACA, Colman RW, Lees RS: Platelet function in hyperlipoproteinemia. *N Engl J Med* 290:434-438, 1974.
7. Colwell JA, Halushka PV, Sarji K, et al: Altered platelet function in diabetes mellitus. *Diabetes* 25 (suppl 2):826-831, 1976.
8. Berger S, Aledont L, Gilbert H, et al: Abnormalities of platelet function in patients with polycythemia vera. *Cancer Res* 33:2683-2687, 1973.

EKG of the Month

W. BARTON CAMPBELL, M.D.

A 61-year-old man underwent coronary arterial bypass grafting to the anterior descending right and obtuse marginal coronary arteries. On the first postoperative day a rhythm strip obtained in the critical care unit was felt to show atrial flutter. An electrocardiogram was obtained (Fig. 1).

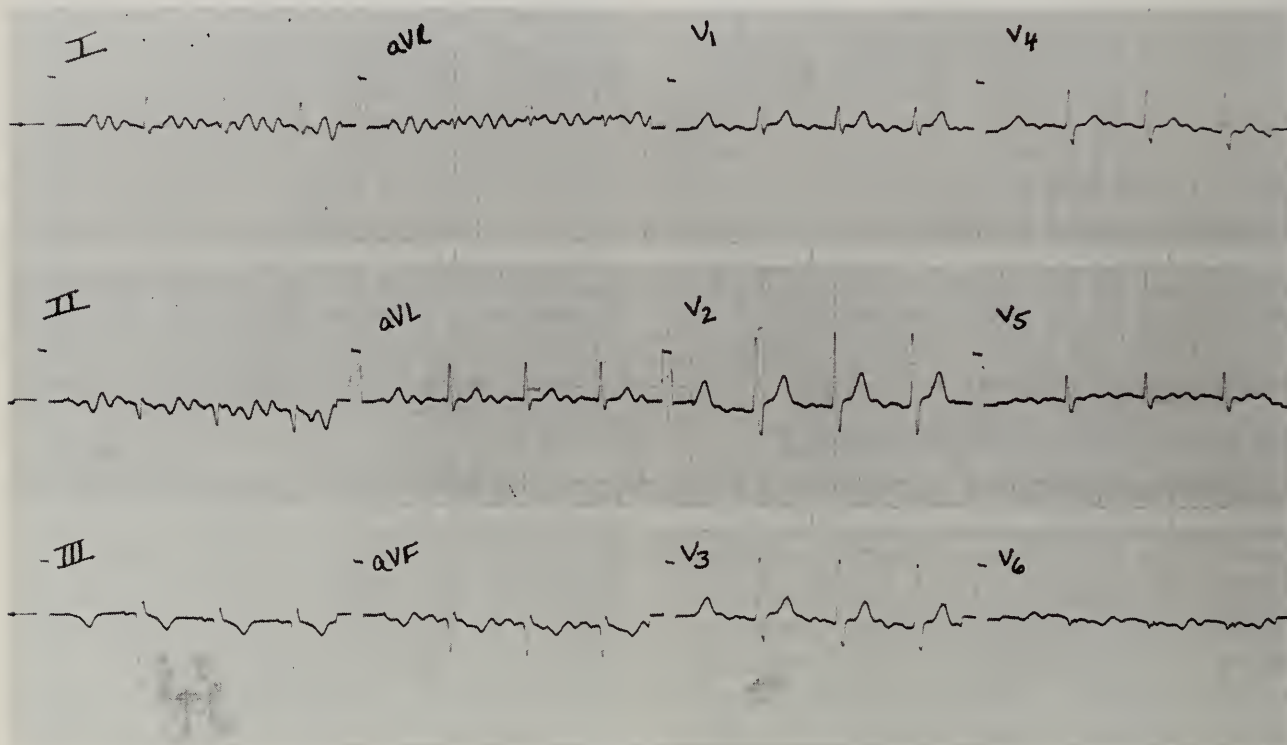


Figure 1

Discussion

The tracing shows a regular R-R interval at a rate of 92/min. There are Q waves in II, III, aVF and the lateral precordial lead V₆. These leads also display T inversion and slight ST segment elevation, findings compatible with inferior lateral infarction, possibly recent. An R wave in V₁ has a duration of .05 seconds with an amplitude of 4.5 mm. These prominent early anterior forces suggest a strictly posterior component with the inferior lateral infarction.

A striking finding is the undulatory or saw-toothed baseline seen best in the limb leads. This has a rate of 400/min and is somewhat rapid for atrial flutter. In lead III P waves can be discerned with a P-R interval of 0.18 seconds. (Leads I, II, and III are obtained simultaneously.) The rapid undulation in baseline was found to correlate with a resting tremor which went away shortly after the tracing was obtained. Muscular tremors are often reflected in the electrocardiogram and may at times be mistaken for atrial flutter.

CONCLUSIONS: (1) Muscular tremor (simulating atrial flutter); (2) Inferior lateral infarction probably evolving, with strictly posterior component.

From the Department of Cardiology, St. Thomas Hospital, Box 380, Nashville, TN 37202.

Tennessee Hemophilia Program

GREGG MAJURE

The Tennessee State Hemophilia Program, administered through the Tennessee Department of Public Health (TDPH), was begun July 1, 1973, when the operating budget was \$300,000 as provided by HB 222. The operating budget has progressively grown to the current \$546,500.

Since the program began, 282 patients have been approved to receive services under its established guidelines. These patients represent approximately half of the hemophiliacs known to reside in Tennessee. There are 252 patients presently eligible for service from the program. They have been diagnosed as follows: Hemophilia A, 172; Hemophilia B, 37; Von Willebrand, 38; Afibrogenemia, 4; Genetic Thrombocytophathia, 1. They are further classified as mild, 62; moderate, 74; severe, 116.

The establishment of a register of all Tennessee hemophiliacs is currently being given an increasing amount of consideration in the program, and it would appreciate receiving comments on the need for the register from interested parties.

There have been a number of changes in the program, primarily in terms of services provided, during the eight years since it began. The administrative staff is assisted in policymaking decisions by the Hemophilia Advisory Committee, which is composed of three hematologists, one hospital administrator, one blood bank representative, one consumer representative, and one public health officer representing each of the various geographic regions of the state. Projects that the program feels indicate progress are the funding of outpatient hemophilia clinics at University of Tennessee hospitals at both Memphis and Knoxville, Vanderbilt University Hospital at Nashville, and T.C. Thompson Children's Hos-

pital in Chattanooga. These projects, which also contain outreach programs and various educational components, are carried out by six registered nurses and one social worker. They result in more accessible and better quality of care for hemophiliacs in the state, as well as valuable information retrieved in a uniform manner, which enables the TDPH to better assess the needs of hemophiliacs in Tennessee and more accurately project program costs.

The primary legislative intent of the Tennessee Hemophilia Program is to provide payment for needed blood and blood products for state-approved patients, and this continues to be the program's number one priority. However, recently the program's service priorities were examined by the Hemophilia Advisory Committee, which reestablished priorities in light of today's medical technology and the current needs of Tennessee's hemophiliacs. The committee made a wide distribution of the new priorities and invited comments before the priorities were finalized. The primary priority change was to make support of the outpatient clinics and preventive education second only to provision of payment for blood and blood products. The administrative staff is now in the process of changing the program priorities and guidelines accordingly.

Tennessee, like many other states across the country, is involved in a very tight economic situation where it has become necessary to place constraints on state spending and in many cases actually reduce program budgets. For the past three years the hemophilia program has operated on a no growth, slightly reduced budget. The program is seeking ways to make the program more cost effective through better management, the use of third party payments when applicable, and emphasis on training for home care. To limit

From the Tennessee Department of Public Health, Nashville.

the complications caused by hemophilia, the program is stressing the need for the hemophiliac to be diagnosed early and to have an annual physical examination by his physician.

Regretfully, because of the tight budget situation and efforts to maximize services, the following changes were made effective Jan. 1, 1981:

- The *maximum* amount to be paid by the program for factor VIII concentrate will be 10 cents per unit and the maximum amount for factor IX concentrate and Autoplex will be 12 cents per unit.

- Program payment for drugs and supplies will no longer be available.

- Payment for inpatient hospitalization will be limited to five days per year.

- From Jan. 1, 1981, to July 1, 1981, patients were admitted on a replacement basis only.

- A residency requirement for admission to the program was established effective Jan. 1, 1981. Applicants must be residents of Tennessee for at least six months to be considered for admission.

- The *maximum* amount to be paid by the program for all hemophilia-related services will be \$8,000 per patient per year.

Depending on program expenditures and frequent evaluations, the TDPH will continue to offer the highest level of service possible.

This is a much needed program in Tennessee and one which reflects the success of much effort by many people. Its goal is the prevention of the complications of hemophilia through the payment for blood and blood products, medical treatment, early diagnosis, and education. 



PENINSULA PSYCHIATRIC HOSPITAL

Jones Bend Road

Louisville, Tennessee 37777

Peninsula Hospital is a 60-bed private psychiatric hospital, providing treatment for acute emotional disturbances, alcohol and drug abuse, with separate programs for adults and adolescents.

Peninsula is accredited by the Joint Commission on Accreditation of Hospitals and is a member of the American Hospital Association, Tennessee Hospital Association, and the National Association of Private Psychiatric Hospitals.

Treatment of Patients

The age range of patients is from teens to advanced age. Peninsula's program applies to all categories of nervous and mental disorders, including alcohol and drug abuse.

The program includes individual psychotherapy, large and small group therapy, as well as special groups for couples, adolescents, parents, families, alcoholics.

Activities

Recreational therapies include tennis courts, gymnasium, swimming pool, handball, paddleball, volleyball, softball, archery, jogging, fishing, horseshoes, shuffleboard, weight lifting, and mountain hiking.

Occupational therapies include crafts, music, sewing, needle art, library, and table games.

A high school educational program is conducted by an educational specialist and is coordinated with public school programs.

Admission Procedures

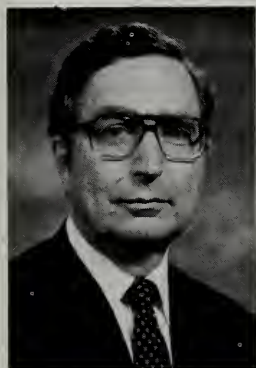
Patients have access to the full range of activities on the scenic 25 acre ground located on Fort Loudon Lake.

Patients may be admitted by telephone appointment upon referral of their doctor or may be self referred. It is desirable for the hospital to receive information from physicians and therapists who have previously treated the patient.

Patient Inquiries Welcome

(615) 573-7913 Bruce Q. Green, M.D.

(615) 983-8216 Will Brownlow, Administrator



ALLEN S. EDMONSON

What Does It Cost?

In these days of third party payers, patients usually don't ask this, but if they do, the likelihood is inversely proportional to how sick they believe they are and how near 100% coverage for health care costs they have. For example, when I began orthopedic surgery 25 years ago, family members usually were inexperienced but effective utilization groups and took the initiative in "taking Grandma home" as soon as possible after surgery for her broken hip. The payment for medical care was first party. Now, this pressure is rarely apparent to the physician. A frequent family goal is to have the hospital "take care of Grandma" as long as possible. The physician is frequently expected to authorize for private rooms, extended stays, and other similar services without any reluctance since "Medicare pays for it" or "major medical covers everything." Unfortunately, in some respects, they are right. Our present system installs the individual physician or hospital committee as the regulating entity for this area of cost. The success of this system for obvious reasons is not uniform, but good medical care in our opinion demands that physicians be responsible for these regulatory decisions. Because of this, most of us have assumed this responsibility more or less enthusiastically. But this is not enough.

We should ask "What does it cost?" every day as we write orders and prescriptions and plan workups or treatment programs. Patients may want to say "spare no expense" or "nothing is too good for me when I'm sick." We are probably the last country in the world where the spare-no-expense philosophy is even considered. Third party payers have long ago measured cost effectiveness and developed regulations and controls in other countries. Physicians in this country still have the freedom to decide how important each laboratory test is or what benefit is to be realized by having the information from each test or x-ray. Treatments and medications qualify for the cost question also. We already know that expensive drugs and treatments are not necessarily the best or even significantly better. Simple knowledge of relative costs must come first. We already judge the value to the patient of laboratory tests, x-rays, and medications. Add one more factor, cost, to decision-making. We can't afford not to.

Allen S. Edmonson M.D.

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OCTOBER, 1981

we ignore the obvious, but in this case happily it did not happen, and Hadley Williams was given a try at the job.

Those of us who have an opportunity to work around the office on Louise Avenue in Nashville know the machine is still well oiled. Every now and then a part drops out and is replaced, but a lot of the parts have been around a long time, and instead of wearing out, as mechanical things do, they only get better as time goes on. When you start mentioning names, you're in trouble, so I'll not; this editorial, in any case, is a tribute to the machine's driver, whose ability has recently been nationally recognized. Elected last year to the Board of Directors of the American Association of Medical Society Executives (AAMSE), Hadley has just been named to a four-year term on an advisory committee to AMA EVP James Sammons, M.D. The committee, formed of AAMSE executives of national, state, and local medical organizations, is charged with advising the EVP on issues related to management and relations of AMA, state and local medical societies, and national specialty organizations.

I can report to you that things are in good hands.

J.B.T.

editorials

The Well-Oiled Machine — Vintage 1981

Several years ago—I won't count them, as time gets away, and I'd as soon not know—I wrote an editorial with a similar title. It referred to the functioning of TMA under its previous Exec, Jack Ballentine. Humanity being as it is, we have a way of ascribing irreplaceability to good men in key positions, probably to avoid facing our own dispensability. When the time came, though, as it must to us all, for Jack to step down, his obvious replacement was the man who for a long time had been his deputy. Sometimes

On Honor, Oaths, Lies, and Liars

A few years back I wrote an editorial in which I took what now seems a naive position; it appears I must regretfully recant. The editorial was to the effect that this nation was at a decided disadvantage in negotiating with the Soviet Union because of their disregard for the truth and their reliance on expediency. In those days I was laboring under the apparent misapprehension that this nation was still constrained by a regard for the prohibition, firmly based on our Judeo-Christian heritage, against bearing false witness.

That was before the strike by the air controllers. To a man (and woman), all 12,000 of them cast aside, apparently without a whimper of conscience, a written oath that they would not strike against the United States government, their employer. Their oath did not count, they said; they signed it only because they could not otherwise get the job. From this time forth we can bargain, it seems, with the Soviet Union from a position of equality; in the eyes of neither side could any

treaty be worth the paper it is written on, as all signed it only to get the job done. It should certainly make the whole process a lot easier, provided everyone understands the common ground rules.

If this seems a cynical view, it is the one thoroughly grounded in Judeo-Christian scripture. Neither the Old Testament prophets nor the New Testament saints held much hope for human perfectability apart from God.

The alternative view is to look on all men as basically honest and therefore perfectable. This leads to such fraudulent inanities as the recent CBS television series about our national defense, in which CBS maintained the Reagan administration, the Congress, and the American people are needlessly fearful and are therefore overdoing their defense effort. To substantiate this, the commentators went to Moscow and interviewed Russians who said it is foolish to believe the Soviet Union wants war—or that they would even fight one unless attacked. The Soviet Union, they said, is surrounded by enemies, and therefore needs its huge armed might to ward off would-be attackers. This view was never debated; it was only seconded by such Soviet apologists as Kosta Tipis and Jack Geiger, and upheld by the alarmist and timid Physicians for Social Responsibility, who find nuclear war so unthinkable that it must never be allowed to happen, and rather than risk it, the United States should do everything—even unilaterally disarm (surrender)—to avoid it; in other words, “better red than dead.” This is the less responsible position, as being under Soviet domination has not brought peace to eastern Europe.

The blatant disregard for their sacred word by approximately 12,000 out of 12,000 supposedly responsible United States citizens, who held jobs requiring the ultimate in responsibility, should have had a sobering effect on the likes of Mr. Walter Cronkite and Mr. Dan Rather, anchormen of the CBS series, who seem to accept any man's statement at its face value. But there is no record it made any impression, as the series was recently repeated.

In case you have any doubts about how far we have fallen, I find it necessary to observe that even in primitive cultures where a casual view is taken of stealing and killing, and where bending the truth is a way of life, a man would die before he would forswear his oath. His word is sacred—his honor his ultimate possession.

That's the bad news.

The good news is that the American people, including other labor unions, have shown scant regard for the position taken by the air controllers. What sympathy that had been expressed for their alleged plight was largely negated by the illegal and immoral remedy they chose. The lack of pangs of conscience demonstrated by the controllers has in fact been widely noted. We are fortunate in having a president who in refusing to bow to blackmail and standing firm exposed the air controllers as frauds; the airline pilots are finding the skies never safer and air traffic never more skillfully or as professionally handled.

I have no idea what the air traffic situation will be when you read this six weeks or so from now. But what has happened has reaffirmed this nation, in spite of the obvious flaws we all have, as a basically moral one, and has shown that the people will back up an administration that acts in a responsible, moral manner. If the situation has done nothing else, it has shown that 12,000 or so unprincipled people are not representative of the American people at large, and that taken as a whole the American people still consider an oath inviolable, and honor their most priceless possession.

Viewed in this way, the inconvenience and struggle have been worth it.

J.B.T.

Tennis, Anyone?

As you drive around any town—or even the countryside—nowadays, you find tennis courts in abundance. Not only that, there are vast sheds accommodating indoor courts, so that in inclement weather the aficionados will not be deprived. Tennis seems to have become America's favorite indoor as well as outdoor sport.

Well, almost.

If you want to know what America's favorite indoor sport (AFIS) is, just look outside your window early any morning now, or try to fight your way to work among the school buses. Although some of those you see will be wearing football suits, football is not (or usually not) played indoors. School is, but that is not the favorite of very many.

Like every sport, this one has its professionals; in fact, this one was the first to have its. Although contact sports have been deemed un-

civilized by many, the professionals of this one have been maintained in the grandest style in the highest of civilizations, at least since the beginnings of recorded history. In fact, they have been closely tied to many religions, as the priests could use them not only to keep the sport under control, but also as a source of predictably steady income.

Although this one is not primarily a spectator sport, like every other sport it has its spectators, and certain publishers have always found it a way to turn a tidy profit. On the other hand, it has, as far as I am aware, seldom been considered high comedy, notwithstanding that a lot of the antics some of the amateurs go through to disguise their participation in it is certainly pretty funny, and that *does* figure in a lot of high comedy.

It has always been a source of some amazement that something so popular could be the object of so many attempts at suppression. That does not involve just the professionals, either. The amateurs have sometimes had it pretty rough. Consider Hester Prynne! It is always a little hard to figure out mankind's attitudes. Perhaps it is that a dash of risk adds spice, increasing the desirability.

A comedy is presently being played in Nashville in which the law enforcement agencies and their employees are the straight men for the news media. It is really a rerun (perennial), except that this one is a little more lurid than its predecessors. The subject of the comedy (which, I hasten to add, is not viewed as such by its actors—or by its straight men, at least) is AFIS, and the object is (ostensibly) to return it to its amateur status. (Actually, its object appears to be to sell newspapers and draw viewers.) The media have gone all out. We have been shown some of the players ready for action. We have been given a map of Nashville—on the front page, yet—showing the principle arenas of play. In the same breath, the media have told the law, “Get out there, boys, and break it up!” You think that ain't funny?

The winners in all of this, of course, are the media, who *do* sell newspapers (with maps) and draw viewers, and the girls, who have gained free advertising they could not possibly have bought at any price. As one of the better equipt players said the other evening while displaying a lot of her equipment on prime time TV, “Business was never better. People have found out where we are and what we do.”

The ancient Greeks found that all comedy has a tragic side, and in this case the losers are, as usual, the public. The girls get arrested, pay their fifty dollar local fine (about an hour's work or less), and go back to plying their trade. Some are arrested several times in one evening. The state law requires that they be jailed, and this is being tried, but it has so crowded the jails there is no room for felons. The police have beefed up their vice squad to accomplish the task. They have also started arresting the “johns,” but that will never be popular and so will die down. In the meantime, burglars are going unapprehended, store managers are gunned down at their business, people are selling dope to kids, ladies are being molested and men mugged in supermarket and hospital parking lots, and so on, while our police are out chasing girls. It is what the public is said—by the media—to want.

The recent baseball strike reminded me of the low regard I have for professional sports, but the hundred thousand or so who crowded the stands for the subsequent all-star game also reminded me my views are not shared by everyone. I do believe, though, that given a choice, most people would rather slack off the “victimless” crimes and concentrate on some others, as long as the professionals don't play in the street.

Like every other sport, this one is not without its hazards. While an occasional skier gets buried in an avalanche, the usual injuries are dislocated joints and broken bones. In tennis you could catch your toe and break your neck gleefully jumping over the net, but usually you just turn your ankle or get an olecranon bursitis. So it is with AFIS. An amateur occasionally gets shot playing in someone else's field, or when she (or he) plays professionally, she (he) may get booked. But you should see how my pathology practice has changed in the past year or so. In addition to the usual large numbers of positive serologies and neisseria cultures (incidentally, the ultimate threat is coming to pass—a penicillin-resistant treponeme is emerging), I find we are having a wart-virus epidemic. This is confirmed by our gynecologic colleagues.

Now while a wart-virus epidemic might at first evoke chortles of mirth, it is far from amusing. Ordinarily, one thinks of little warts around the perineum or beneath the prepuce in dirty people. Such lesions used to respond adequately to podophyllin or hyfuration, and seldom made it to the pathologist. These days, though, scarcely a day goes by without my seeing at least one flat

condyloma of the cervix, usually with some, and often with marked, epithelial dysplasia, and not infrequently with carcinoma-in-situ as well. In fact, Richart, at Columbia-Presbyterian, believes most ca-in-situ of the cervix is due to the wart virus. There is no reason it should not occur on the penis, as well, and I think it will.

In keeping with the times, like gonococcal and treponemal infections, warts are occurring a lot around the anus, on the lips, and in the pharynx. I have even seen one inside the rectum! I am not speaking necessarily, or even particularly, of infections in the professional athletes, who, like the pros in any other sport, are trained to be careful (even though they may get careless at times). I am speaking of infections in amateurs who would not go near the pros—amateurs from both sides of the tracks. All they really get is cancer—the dash of risk that adds the spice, so to speak.

Tennis, anyone?

J.B.T.



C. Barton Etter, age 76. Died August 14, 1981. Graduate of University of Tennessee College of Medicine. Member of Memphis-Shelby County Medical Society.

Minyard Dee Ingram, Jr., age 62. Died August 2, 1981. Graduate of Vanderbilt University School of Medicine. Member of Nashville Academy of Medicine.

Harold G. Sibold, age 55. Died August 18, 1981. Graduate of University of Tennessee College of Medicine. Member of Chattanooga-Hamilton County Medical Society.

David Strayhorn, Sr., age 77. Died August 3, 1981. Graduate of Vanderbilt University School of Medicine. Member of Nashville Academy of Medicine.

Robert C. Thompson, age 65. Died August 24, 1981. Graduate of University of Tennessee College of Medicine. Member of Chattanooga-Hamilton County Medical Society.

new members

The JOURNAL takes this opportunity to welcome these new members to the Tennessee Medical Association.

FRANKLIN COUNTY MEDICAL SOCIETY

David L. Stockton, M.D., Winchester

CONSOLIDATED MEDICAL ASSEMBLY OF WEST TENNESSEE

Donald R. Spencer, M.D., Brownsville

MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

Stephen L. Averett, M.D., Memphis
Vijaya L. Duggirala, M.D., Memphis
David E. Levenson, M.D., Memphis
Lawrence E. Madlock, M.D., Memphis
Michael Evans Posey, M.D., Memphis
Jorgelina Ramonet, M.D., Memphis
Rome Sherrod, II, M.D., Memphis

NASHVILLE ACADEMY OF MEDICINE

Douglas H. Brown, M.D., Nashville

NORTHWEST TENNESSEE ACADEMY OF MEDICINE

Jerry Upshaw Carter, M.D., Dyersburg

ROANE-ANDERSON COUNTY MEDICAL SOCIETY

William E. Bennett, M.D., Harriman
Clement H. Block, Jr., M.D., Oak Ridge
Charles W. Bruton, M.D., Oak Ridge
Thomas H. Metcalf, M.D., Oak Ridge

SULLIVAN-JOHNSON COUNTY MEDICAL SOCIETY

Larry J. Foster, M.D., Kingsport

national news

From the AMA's Office in Washington, D.C.

Ins and Outs of the Budget

Experts representing butchers, bakers, candlestick makers and just about every other human enterprise under the American sun continue to tramp and tread

through the maze of details contained in the historic Reagan budget reconciliation and tax cut legislation searching to better understand what's in store for whom.

Future federal spending for health care is pretty clear, however. The budget reconciliation measure cuts \$2 billion in health spending over previously projected levels with most of the reductions coming to roost on the Medicaid program.

State governments will have to tighten their belts on the Medicaid program.

Federal matching payments will be reduced by 3% in the fiscal year starting Oct. 1 under the budget reconciliation law. The reduction will climb to 4% in fiscal 1983 and 4.5% in fiscal 1984. More than \$1 billion in federal payments to the states will be missing.

The administration's original plan for a flat 5% cap on increased federal outlays for Medicaid was scrapped by Congress. The final Medicaid plan followed closely the version of the budget bill approved by the House which voted a 3%, 2%, 1% cut over three years. The Senate had proposed a 9% cap and reduction of the federal minimum contribution to 40% from the present 50%.

The budget law provides relief for states if they meet certain criteria. The federal cut could be offset by 1% each for operating a qualified hospital cost review program, having an area unemployment rate exceeding 150% of the national average, and sufficient recoveries from fraud and abuse activities. State-effected savings over a certain percentage also would qualify for upping federal payments.

A controversial Senate amendment that would have repealed Medicaid beneficiaries' freedom of choice of providers was tossed out in conference. Instead, the bill allows states to apply for waivers from the Health and Human Services (HHS) Secretary to eliminate freedom of choice, allowing states to direct beneficiaries to hospitals or physicians.

The law permits states to require individuals who overutilize services to use selected providers, and allows states to limit the participation of providers found to have abused the program.

The Medicaid section of the budget law provides that states in developing their hospital reimbursement payment rates must take into account the situation of hospitals that serve a disproportionate number of low-income patients. The HHS Secretary is required to develop a model prospective payment method for inpatient hospital services designed for use in both Medicaid and Medicare.

States are authorized to buy laboratory services and medical devices through competitive bidding. The HHS Department could allow states to establish cost-effective arrangements for services and drugs.

States may enter into Medicaid prepaid risk arrangements with federally qualified health maintenance organizations (HMOs). The limitation on Med-

icare and Medicaid enrollment in HMOs with state Medicaid contracts is raised from 50% to 75% of the total membership.

Capitation Loss Curtailed

The nation's medical schools next fiscal year will lose \$40 million in capitation aid under the budget reconciliation law. However, medical school and other health manpower programs in general were not cut as deeply as the administration recommended.

"Schools of medicine fared quite well compared to the bleak future they would have faced had the provisions embodied in the Senate bill been accepted," said the Association of American Medical Colleges (AAMC). However, virtually all of the money authorization levels in the final budget measure are below the current appropriations for educational activities.

The elimination of the capitation program of general aid for medical schools was a foregone conclusion, since both House and Senate budget bills proposed it. President Carter had proposed killing capitation the last two years of his administration.

On other programs, the reconciliation bill:

- Renews the Exceptional Financial Need Scholarship program at levels of \$6 million, \$6.5 million and \$7 million for the next three fiscal years.
- Retains the Health Professions Student Loan program with ceilings of \$12 million, \$13 million and \$14 million over three years.
- Continues the National Health Service Corps scholarship program with awards of \$110 million, \$120 million and \$130 million for three fiscal years, enough money to provide 550 new scholarships each year. The administration and the Senate had wanted a freeze of new scholarships.
- Funds the Health Education Assistance Loan program at \$200 million, \$225 million and \$250 million.

The National Research Service Awards of keen interest to medical schools were extended for two years at \$182 million and \$195 million, substantially above the \$150 million implied in the Senate bill. The AAMC said that as a result the National Institutes of Health (NIH) in the fiscal year starting Oct. 1 will be able to support between 8,000 and 10,000 trainees.

The final version of the Guaranteed Student Loan program limits eligibility to those students with adjusted gross family incomes of \$30,000 or less, except where students can document need otherwise. All students must pay a 5% origination fee when they receive their loans.

Under the budget law, grants for departments of family medicine were set at \$10 million, \$10.5 million and \$11 million; ceilings for area health education centers were authorized at \$21 million, \$22.5 million and \$24 million.

Federal Radiology Regulation Proposed

A federal program to encourage accreditation of people who perform radiologic procedures and minimum standards for certification of people who administer radiologic procedures was a surprising provision of the budget reconciliation law.

Since the provision gives much discretion to the HHS Secretary, there is a question of whether such a program will get far off the ground. The administration had no chance to take a position on the measure which was opposed in previous years by the American Medical Association and the American Hospital Association, among others, on grounds it would duplicate existing private quality controls.

The bill requires the HHS Secretary to issue regulations promulgating minimum standards for the accreditation of educational programs for training and minimum standards for certification. The bill does not apply to practitioners.

The HHS Secretary also is called upon to develop model state legislation making it unlawful for non-certified people to perform radiologic procedures and to provide that educational requirements for certification will be limited to those programs accredited by the state.

The provision gives the HHS Secretary authority to set guidelines for safe levels of radiologic exposure for medical and dental procedures.

There are no provisions to enforce compliance by the states, but the standards would be applicable to federal agencies.

Insurers Back Off Preventive Care

Health insurers lack financial incentives to provide benefits for preventive care, a federally sponsored cost-benefit analysis has shown.

The upfront cost of paying for hypertension screening or Pap smears is greater than the long-term savings the health insurer can expect to reap, the Congressional Office of Technology Assessment (OTA) concluded.

Though the costs of screening accrue only to the insurer, the benefits are widely distributed. They accrue—in the form of better health and productivity—to the people screened, their life insurers, employers, government, and society. The health insurer's benefits are reduced further because some of the people screened eventually leave the plan.

The OTA report suggested that the government could provide incentives such as tax breaks and financial assistance to establish preventive health programs in the private sector. Public-private partnership is needed, the report said, because prevention programs "are often too expensive for either the public or private sector to undertake independently."

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TMA Members Receive AMA Physician's Recognition Award

Fifty-one TMA members qualified for the AMA Physician's Recognition Award during July, 1981.

To qualify for the PRA, a minimum of 150 hours of continuing medical education must be earned over a three-year period; 60 of these hours must be Category 1.

This list does not include members who reside in other states. Names of additional PRA recipients will be published as they are received from AMA.

John W. Avera, M.D., Oak Ridge
William B. Berry, M.D., Chattanooga
John H. Beveridge, M.D., Nashville
John C. Brothers, M.D., Nashville
Jane L. Warne Brown, M.D., Jackson
Joe L. Brown, M.D., Jackson
John H. Burkhart, M.D., Knoxville
P. Castelnovo-Tedesco, M.D., Nashville
David C. Chaffin, M.D., Sevierville
Fenwick W. Chappell, M.D., Memphis
Thomas G. Cranwell, M.D., Pikeville
John J. Craven, M.D., Knoxville
Diane H. W. Crocker, M.D., Memphis
Malcolm B. Daniell, M.D., Chattanooga
Lloyd C. Davis, M.D., Knoxville
Richard A. Dew, M.D., Oak Ridge
Gary W. Duncan, M.D., Nashville
Roy C. Ezell, M.D., Nashville
John A. Fincher, Jr., M.D., Bristol
James C. Fleming, M.D., Memphis
Gordon R. Freeman, M.D., Dyersburg
Gail H. Gallemore, M.D., Johnson City
Sidney C. Garrison, Jr., M.D., Murfreesboro
Jerry W. Grise, M.D., Memphis
Ronald K. Grossman, M.D., Memphis
Robert L. Haley, Jr., M.D., Madison

Tom N. Humphrey, M.D., Selmer
Charles E. Inman, M.D., Johnson City
Joseph M. Ivie, M.D., Nashville
William J. Jekot, M.D., Nashville
Yune-Gill Jeong, M.D., Chattanooga
Bruce E. Jones, M.D., Nashville
Kent Kyger, M.D., Nashville
Aaron M. Lefkovits, M.D., Memphis
William E. Long, M.D., Memphis
Lonnie C. May, Jr., M.D., Knoxville
Douglas P. Mitchell, M.D., Nashville
E. Robert Neely, M.D., Knoxville
William A. Nelson, M.D., Knoxville
Denis M. O'Day, M.D., Nashville
George W. Oden, M.D., Greeneville
Ernest L. Posey, III, M.D., Chattanooga
Jeffrey P. Robbins, M.D., Bristol
Russell R. Smith, M.D., Madison
John B. Standridge, M.D., Cleveland
David J. Tepper, M.D., Chattanooga
Rena M. Thomison, M.D., Madison
James W. Williams, M.D., Memphis
Claude H. Workman, Jr., M.D., Memphis
Milton G. Yoder, M.D., Knoxville
John Zanella, M.D., Memphis

announcements

CALENDAR OF MEETINGS

NATIONAL

Nov. 1-5 American Public Health Association — Los Angeles
 Nov. 1-6 American Academy of Ophthalmology — Georgia Wild Congress Center, Atlanta
 Nov. 1-6 American Academy of Physical Medicine and Rehabilitation — Town and Country Hotel, San Diego
 Nov. 3-9 American Medical Women's Association — Bonaventure, Los Angeles
 Nov. 3-11 American Society of Cytology — Chase-Park Plaza Hotel, St. Louis
 Nov. 4-7 American Group Practice Association — Century Plaza, Los Angeles

Nov. 5-7 Central Society for Clinical Research — Drake Hotel, Chicago
 Nov. 10-14 Cancer 1981/Cancer 2001 — An International Colloquium (sponsored by Univ. of Texas M.D. Anderson Hosp. and Tumor Inst.) — Shamrock Hilton Hotel, Houston
 Nov. 11-12 AMA Medical Staff Leadership Seminar — Biltmore Hotel, Los Angeles
 Nov. 15-18 Southern Medical Association 75th Annual Scientific Assembly — The Rivergate, New Orleans
 Nov. 15-20 International College of Surgeons — Hotel del Coronado, Coronado, Calif.
 Dec. 3-5 American Epilepsy Society — Waldorf Astoria, New York
 Dec. 4-5 American College of Chemosurgery — San Francisco
 Dec. 5-8 American Association for Respiratory Therapy — Anaheim, Calif.
 Dec. 5-8 American Society of Hematology — Hilton Palacis del Rio, San Antonio, Tex.
 Dec. 5-10 American Academy of Dermatology — San Francisco Hilton, San Francisco

Dietetic Food Ingredients Can Cause Diarrhea

Dietetic Food Diarrhea is a new name for an old ailment. It is caused by the ingredients in "sugar-free" foodstuffs used as weight reduction aids and to help prevent dental caries. The offending element is the hexitols, a group of sugar alcohols. These include sorbitol and mannitol, the key ingredients in many sugar-free foods.

Earlier reports had noted the occurrence of diarrhea following use of large quantities—50 to 100 sticks daily—of sugarless chewing gum, and had named the ailment "chewing gum diarrhea." Those developing the diarrhea usually had consumed large quantities of dietetic products. The diarrhea stopped when the patients quit using the dietetic foods.

Poisonings Reported From Popular Seafoods

Don't eat the barracuda, and stick to the little ones when eating grouper or red snapper. The health risk is ciguatera fish poisoning, and it will make you very sick. Outbreaks of the poisoning from eating reef fish caught off the Atlantic coast of Florida occurred several years ago; in Florida and Hawaii ciguatera poisoning is a sizable public health problem.

If you should eat a piece of fish containing the ciguatera toxin, the result will be diarrhea and vomiting, muscle pain, burning or prickling sensation in hands and feet, itchy skin, headache, dizziness, weakness, but the attack is seldom fatal.

In a study of cases reported to the Dade County (Miami) Department of Public Health, grouper and snapper were the fish most frequently implicated. Most cases were in late spring and summer. Small fish seldom caused problems. Illness followed eating of portions cut from big fish. Barracuda was so often involved that sale of the fish commercially is now banned under the Miami City Code.

It is assumed that fish become toxic by eating smaller marine organisms containing the offending substance. Big fish eat the little fish and thus accumulate large amounts of the poison, which does not disturb the fish itself. The toxin does not affect taste or appearance of the fish.

Cooking has no impact on the toxin, and neither does freezing. The fish market or restaurant serving the fish is not responsible, as the attack is not triggered by improper storage or handling.

Grouper is most often the culprit, causing 60% of the southeastern Florida cases. Snapper is next most common with 14%.

There isn't much public health authorities can do to reduce attacks of ciguatera fish poisoning, short of banning sale and eating of the offending fish. Since Floridians eat about 12 million pounds of grouper and red snapper annually, this would not be practical.

Ciguatera fish poisoning is common in the Caribbean and South Pacific. First reference to the illness was by a Spanish sea captain in 1555. One test in the Pacific found that the toxin was present in more than two thirds of red snapper weighing more than six pounds.

Fishing should be suspended for some time in the area of a coral reef that has been disturbed by construction of a wharf, pier or bridge. Consumption of smaller grouper or snapper is advisable. If large fish are eaten, the toxin may be diluted by soaking the flesh in repeated changes of water.

Disposable Injection Needles May Be Reused Several Times

Diabetic patients can save money by reusing disposable syringe-needle units several times to inject insulin rather than discarding each unit after one use.

A study from the University of Virginia School of Medicine, Charlottesville, reported on 14 insulin-dependent diabetics who were asked to use their insulin syringe-needle units three times in succession to determine efficacy and safety of this practice. The study continued for several months. The needles were cleansed with alcohol swabs after each use. No signs of infection at the injection site were observed, and multiple use of disposable insulin syringe-needle units appears to be safe and cost beneficial.

Thyroid Supplements Vary Widely in Potency

Different brands of a thyroid supplement can vary considerably in potency. The thyroxine content was significantly different in two generic products when compared with a brand name thyroxine product, and even the brand name had only 78% of expected potency.

Although manufacturers should be required to measure the thyroxine content of their tablets, the patient who sticks with one particular brand will be able to adjust the dosage to achieve the desired balance of thyroid output. But he might be in trouble if he switches to a supposedly equivalent generic product in an effort to save money.

Until such time that levothyroxine products become more uniform, physicians, pharmacists, and legislators should not encourage product switching.

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The continuing medical education accreditation program of the TMA has full approval by the Accreditation Council for Continuing Medical Education. An accredited institution or organization may designate for Category 1 credit toward the AMA Physician's Recognition Award those CME activities that meet appropriate guidelines. If you wish information as to how your hospital or society may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203.

IMPORTANT NOTICE

Published in this section are all educational opportunities which come to our attention which might be of interest to our membership. As some of these are very long, full year schedules, and others are detailed descriptions of courses, in order to conserve space, most of them will be published in only one issue of the Journal.

IN TENNESSEE

VANDERBILT UNIVERSITY

Clinical Training Program

Opportunities for advanced clinical education for physicians in family practice and in various subspecialties have been developed by the School of Medicine and the Division of Continuing Education of Vanderbilt University. The practicing physician, with the guidance of the participating department chairman, can plan an individualized program of one to four weeks to meet recognized needs and interests. The experience will include contact with patients, discussion with clinical and academic faculty, conferences, ward rounds, learning individual procedures, observing new surgical techniques, and access to excellent library resources. Experience in more than one discipline may be included.

Participating Departments and Divisions

Allergy & Immunology	Samuel Marney, M.D.
Anesthesiology	Bradley E. Smith, M.D.
Cardiology	Gottlieb C. Friesinger, III, M.D.
Chest Diseases	James D. Snell, M.D.
Clinical Pharmacology	John A. Oates, M.D.
Dermatology	Lloyd King, M.D.
Diabetes	Oscar B. Crofford, M.D.
Endocrinology	Grant W. Liddle, M.D.
Gastroenterology	Steven Schenker, M.D.
General Internal Medicine	W. Anderson Spickard, M.D.
Hematology	Sanford B. Krantz, M.D.
Infectious Diseases	Zell A. McGee, M.D.
Medicine	Grant W. Liddle, M.D.
Neurology	Gerald M. Fenichel, M.D.
Obstetrics & Gynecology	Lonnie S. Burnett, M.D.
Oncology	Robert Oldham, M.D.
Orthopedics	Paul W. Griffin, M.D.
Pathology	William H. Hartmann, M.D.
Pediatrics	David T. Karzon, M.D.
Psychiatry	Marc H. Hollender, M.D.
Radiology	A. Everette James, Jr., Sc.M., J.D., M.D.
Renal Diseases	H. Earl Ginn, M.D.
Rheumatology	Theodore Pincus, M.D.
Surgery	
Cancer Chemotherapy	Vernon H. Reynolds, M.D.
General	H. William Scott, Jr., M.D.
Neurological	William F. Meacham, M.D.
Ophthalmology	James H. Elliott, M.D.
Oral	H. David Hall, D.M.D.

Pediatric	James A. O'Neill, M.D.
Plastic	John B. Lynch, M.D.
Renal Transplantation	Robert E. Richie, M.D.
Thoracic & Cardiac	Harvey W. Bender, M.D.
Urology	Frederick K. Kirchner, Jr., M.D.

Eligibility: All licensed physicians are eligible. **Administrative Fee:** \$200 per week. **Credit:** AMA Physician's Recognition Award (Category 1) and AAFP Continuing Education Accreditation. **Application:** For further information and application, contact Continuing Medical Education, Vanderbilt University Medical Center, Nashville, TN 37232. Tel. (615) 322-2716.

Continuing Education Schedule

November	Annual Rhamy-Shelley Lectureship in Urology
Dec. 4-5	High Risk Obstetrics Seminar and the Everett M. Clayton Memorial Lecture (10 hours)
Dec. 5-6	Annual Update in Anesthesiology

For information contact Division of Continuing Medical Education, Vanderbilt School of Medicine, Nashville, TN 37232. Tel. (615) 322-2716.

MEHARRY MEDICAL COLLEGE

Extended Continuing Education Program

Arrangements have been made with the following services and departments in the medical school to allow practicing physicians to participate in that service's activities for a period of one to four weeks. This program provides an opportunity for physicians to study in depth for a specified period. The schedule of activities is individualized in response to the physician's request by the participating department. The experience includes conferences, ward rounds, audiovisual materials and contact with patients, residents and faculty.

Participating Departments

Anesthesiology	Ramon S. Harris, M.D.
Family Practice	John Arradondo, M.D.
Internal Medicine	
Cardiology	John Thomas, M.D. Kermit R. Brown, M.D. Qamar A. Kahn, M.D.
Chest Disease	Joseph M. Stinson, M.D. Paul A. Talley, M.D. Edward A. Mays, M.D.
Dermatology	Thomas W. Johnson, M.D. David Horowitz, M.D.
Gastroenterology	Ludwald O. P. Perry, M.D. Buntwal M. Somayaji, M.D.
General Medicine	Edward A. Mays, M.D.
Hematology/Oncology	Robert S. Hardy, M.D.
Neurology	Calvin L. Calhoun, Sr., M.D. Gregory Samaras, M.D.
Obstetrics & Gynecology	Henry W. Foster, M.D.
Ophthalmology	Axel C. Hansen, M.D.
Orthopedics	Wallace T. Dooley, M.D.
Pathology	Louis D. Green, M.D. John C. Ashhurst, M.D.
Pediatrics	E. Perry Crump, M.D.

Surgery	
General	Louis J. Bernard, M.D.
Neurological	Charles E. Brown, M.D.
Thoracic and Cardiovascular	David B. Todd, M.D.
	Ira D. Thompson, M.D.
Urology	Marcelle R. Hamberg, M.D.

Fee: \$100 per week. **Credit:** AMA Physician's Recognition Award (Category 1), AAFP Continuing Education Accreditation, and Continuing Education Units by Meharry Medical College. **Application:** For further information contact Frank A. Perry, Sr., M.D., Director, Continuing Education, Meharry Medical College, 1005 18th Ave. North, Nashville, TN 37208, Tel. (615) 327-6235.

UNIVERSITY OF TENNESSEE

Continuing Education Schedule

This comprehensive listing of UTCHS courses includes programs of the Chattanooga, Knoxville, and Memphis units. The codes (C), (K), and (M) indicate the continuing education unit handling the arrangements for a particular program.

Nov. 13	(K)	10th Annual Internal Medicine Symposium
Nov. 20-21	(K)	Trauma
Nov. 31-Dec. 2	(M)	Norfleet Forum
Dec. 3-5	(C)	Basic Cardiology, EKGs and Therapy
Feb. 1-3	(K)	Emergency Medicine Symposium
Feb. 6-13	(K)	4th Annual KAM Education Ski Meeting
March 14-19	(M)	15th Annual Family Practice Review Course
April 5-7	(K)	Hypertension
June 10-12	(K)	ENT and Otolaryngology

Community-Based CME

Knoxville Campus

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Acute exacerbation of chronic bronchitis caused by *H. influenzae**

*Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to *H. influenzae*.

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Contraindications Contraindicated in individuals with history of an allergic reaction to penicillins.

Warnings Cyclacillin should only be prescribed for the indications listed herein.

Cyclacillin has less in vitro activity than other drugs of the ampicillin class. However, clinical trials demonstrated it is efficacious for recommended indications.

Serious and occasional fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin. Although anaphylaxis is more frequent following parenteral use, it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with history of sensitivity to multiple allergens. There are reports of patients with history of penicillin hypersensitivity reactions who experienced severe hypersensitivity reactions when treated with a cephalosporin. Before penicillin therapy, carefully inquire about previous hypersensitivity reactions to penicillins, cephalosporins and other allergens. If allergic reaction occurs, discontinue drug and initiate appropriate therapy. Serious anaphylactoid reactions require immediate emergency treatment with epinephrine. Oxygen, I.V. steroids, airway management, including intubation, should also be administered as indicated.

Precautions Prolonged use of antibiotics may promote overgrowth of nonsusceptible organisms. If superinfection occurs, take appropriate measures.

PREGNANCY: Pregnancy Category B. Reproduction studies performed in mice and rats at doses up to 10 times the human dose revealed no evidence of impaired fertility or harm to the fetus due to cyclacillin. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, use this drug during pregnancy only if clearly needed.

NURSING MOTHERS: It is not known whether this drug is excreted in human milk. Because many drugs are, exercise caution when cyclacillin is given to a nursing woman.

Adverse Reactions Oral cyclacillin is generally well tolerated. As with other penicillins, untoward sensitivity reactions are likely, particularly in those who previously demonstrated penicillin hypersensitivity or with history of allergy, asthma, hay fever, or urticaria. Adverse reactions reported with cyclacillin: diarrhea (in approximately 1 out of 20 patients treated), nausea and vomiting (in approximately 1 in 50), and skin rash (in approximately 1 in 60). Isolated instances of headache, dizziness, abdominal pain, vaginitis, and urticaria have been reported. (See WARNINGS) Other less frequent adverse reactions which may occur and are reported with other penicillins are anemia, thrombocytopenia, thrombocytopenic purpura, leukopenia, neutropenia and eosinophilia. These reactions are usually reversible on discontinuation of therapy.

As with other semisynthetic penicillins, SGOT elevations have been reported.

As with antibiotic therapy generally, continue treatment at least 48 to 72 hours after patient becomes asymptomatic or until bacterial eradication is evidenced. In Group A beta-hemolytic streptococcal infections, at least 10 days' treatment is recommended to guard against risk of rheumatic fever or glomerulonephritis. In chronic urinary tract infection, frequent bacteriologic and clinical appraisal is necessary during therapy and possibly for several months after. Persistent infection may require treatment for several weeks.

Cyclacillin is not indicated in children under 2 months of age.

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Bronchitis and Pneumonia		
Mild or Moderate Infections	250 mg q.i.d.	50 mg/kg/day q.i.d.
Chronic Infections	500 mg q.i.d.	100 mg/kg/day q.i.d.
Otitis Media	250 mg to 500 mg q.i.d.†	50 to 100 mg/kg/day†
Skin & Skin Structures	250 mg to 500 mg q.i.d.†	50 to 100 mg/kg/day†
Urinary Tract	500 mg q.i.d.	100 mg/kg/day

*Dosage should not result in a dose higher than that for adults.

†depending on severity

The Pectoralis Major Myocutaneous Flap In Head and Neck Surgery

WINSOR V. MORRISON, M.D.; B. MANRIN RAINS, III, M.D.;
FRANCISCO G. MORENO, M.D.; and WILLIAM R. BOND, JR., M.D.

In the past, patients undergoing extensive extirpative procedures for head and neck carcinomas have had to endure numerous staged procedures and required multiple flaps for closure of head and neck defects and fistulas. Not only has this produced significant personal anguish for the patients, but it has also strained family relationships, taxed the nursing and laboratory staff, and increased the physician man-hours while the patient is being reconstructed. In addition, increased hospital cost has placed excessive financial burden on the patients' families.

Recently, we of the Department of Otolaryngology and Maxillofacial Surgery at the University of Tennessee Center for the Health Sciences and the Veterans Administration Medical Center in Memphis, Tenn., have introduced a one-staged reconstructive procedure using the newly developed pectoralis major myocutaneous flap (PMM flap) for primary closure of head and neck defects.

This flap was developed independently by

Ariyan,¹ and Baek and Biller.² During this past year and a half it has become our "work horse flap" and has largely replaced the deltopectoral flap³ as our multipurpose flap.

The principle of the PMM flap is that it is based on a direct vascular supply to a skin island paddle^{4,5} which when rotated on its vascular pedicle can provide bulk and coverage of the carotid artery as well as skin reconstruction in large defects.

The pectoralis major muscle is a thick triangular muscle on the anterior chest wall.⁶ It has three origins: (1) the clavicular part, which involves the anterior and medial aspect of the clavicle; (2) the costal part, which involves the anterior sternum and adjacent costal cartilages; and (3) a small abdominal part from the aponeurosis of the upper abdominal wall. This fan-shaped muscle then extends upward and laterally to insert at the tip of the bicipital groove of the humerus and the deltoid tuberosity. The blood supply to the PMM flap is through the lateral thoracic artery, which gives a small contribution, and the thoracoacromial artery, its major contributor (Fig. 1). This latter vessel arises from the second part of the axillary artery, pierces the clavipectoral fascia above the upper aspect of the pectoralis minor muscle and gives off four vessels: the clavicular, the acromial, the deltoid, and the pectoral branch, the largest, which is the major vascular

From the Department of Otolaryngology and Maxillofacial Surgery, University of Tennessee Center for the Health Sciences and Veterans Administration Medical Center, Memphis.

Reprint requests to Department of Otolaryngology, University of Tennessee, Memphis, TN 38163 (Dr. Morrison).

PMM FLAP/Morrison

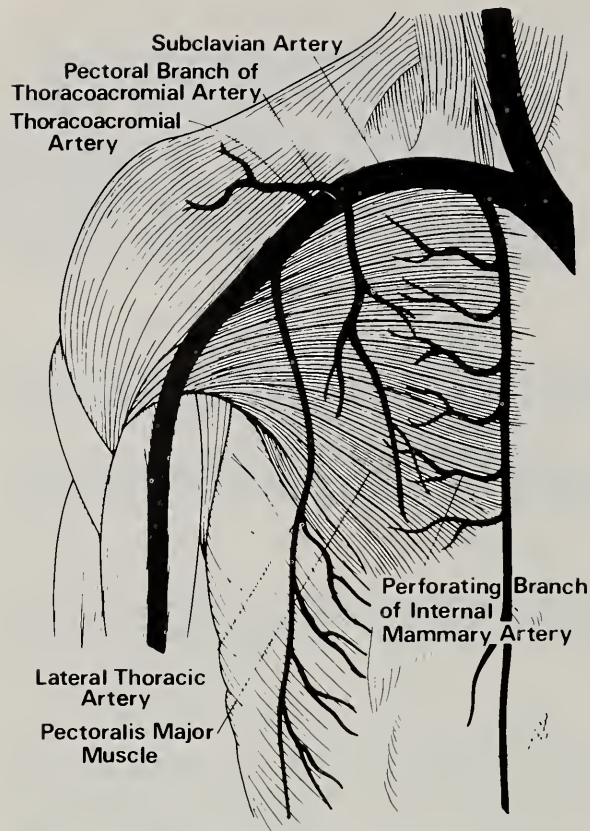


Figure 1. Vascular supply of pectoralis major myocutaneous flap. Major supply from thoracoacromial artery trunk.

supply to the pectoralis major muscle (Fig. 2). The thoracoacromial artery lies inferior to the clavicle and is not injured in a radical neck dissection. It descends on the undersurface of the muscle, anastomosing with the intercostal branches of the internal mammary artery and the lateral thoracic artery and finally gives cutaneous distribution to the skin island paddle through direct "perforating" muscular branches. It is because of this dominant vascular pedicle that the skin island paddle remains viable. Loss of this vascular supply by twisting or kinking risks loss of the entire flap.

The nerve supply to the PMM flap is through the lateral and medial pectoral nerves.

Flap Design and Operative Techniques

The PMM flap may include the entire pectoralis major muscle, except for the clavicular fibers. Though the overlying skin island usually measures 100 to 200 sq cm, it may include almost the entire hemichest wall, from the midline medially to the anterior axillary line laterally and from the clavicle superiorly to the costal margin inferiorly.⁷

The skin island flap is designed to conform to the surgical defect, taking into account a 20% shrinkage of the flap. The skin incision is made

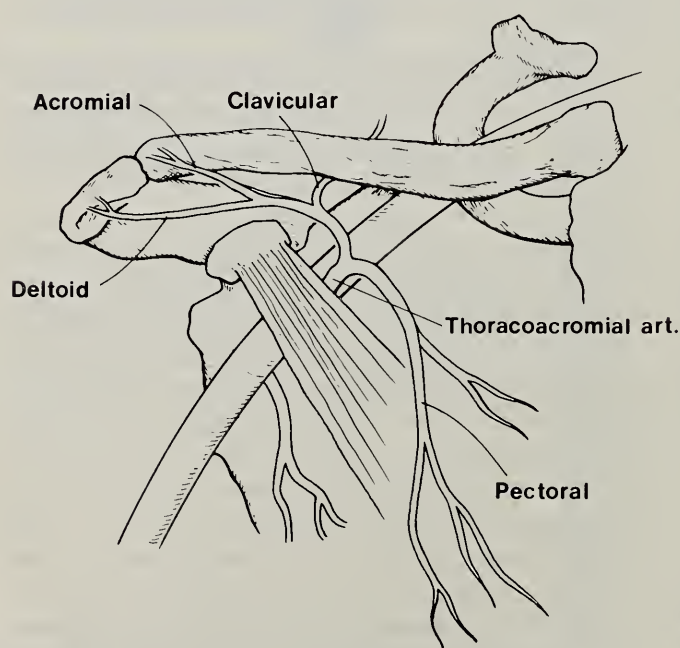
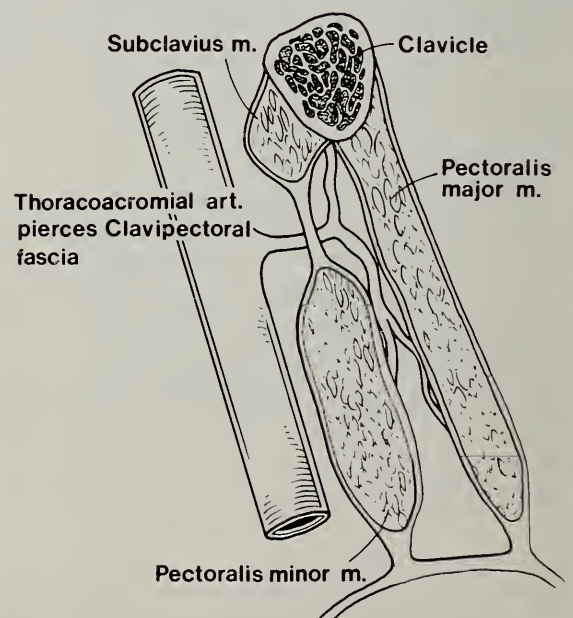


Figure 2. Detail of thoracoacromial artery as it pierces the deltopectoral fascia beneath the clavicle, therefore not injured during radical neck dissection.



and continued to the pectoralis fascia. The upper end of the skin incision extends cephalad and laterally toward the anterior axillary line. Figure 3 shows both the PMM flap and a deltopectoral flap, in case of future need for a deltopectoral flap. The medial and lateral chest flaps are elevated being careful not to cut through the perforating vessels of the internal mammary artery feeding the deltopectoral flap. This maneuver exposes the pectoralis major muscle. Inferiorly on the paddle the incision is completed as drawn. Care should be taken to avoid stretching the length of the PMM flap, depending on the individual anatomy, the sixth to seventh rib being the inferior limit. Some of our flap dehiscences have been encountered when part of the skin paddle (>20%) was off the pectoralis muscle. After making all the cuts, a few tacking sutures from the skin island to muscle creates a "hamburger-like" effect. This helps to keep the surgeon or his assistants from shearing the skin from the muscle and to facilitate the dissection and later rotation of the flap. The muscle dissection is started inferolaterally where the trapezius and pectoralis are separated by an investing fascia. By blunt dissection this is elevated and the neurovascular bundle is first felt and then visualized underneath and laterally in the fascia surrounding the pectoralis major muscle. With one hand underneath the muscle, and feeling the neurovascular bundle (a pulsating cordlike feel-

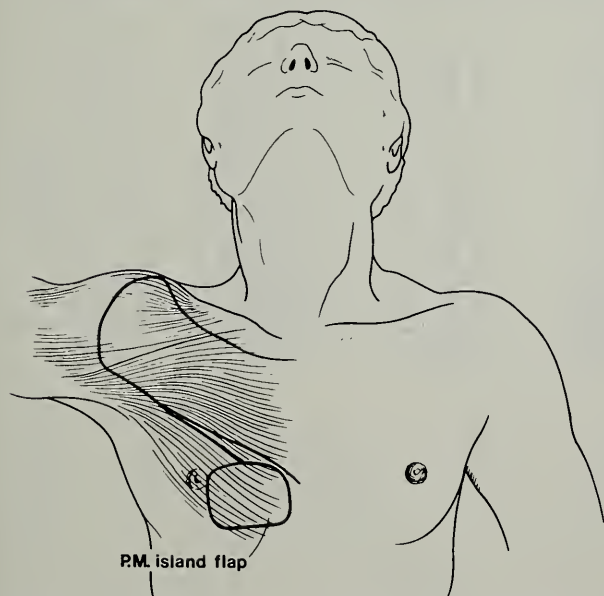


Figure 3. Outline of surgical incisions with preservation of deltopectoral flap for possible future or concomitant use.

TABLE 1

SUMMARY OF PECTORALIS MAJOR MYOCUTANEOUS FLAP RECONSTRUCTIONS (N=23)

Tumor Origin	
Floor of Mouth	3
Tongue	2
Tonsil	9
Pyrimiform Sinus-Cervical Esophagus	2
Buccal Mucosa	3
Parotid with skin involvement	1
Larynx with skin involvement	3
Area Resurfaced	
Cutaneous Defects	6
Intraoral and Cutaneous Defects	3
Intraoral Defects	6
Tongue Reconstruction	2
Pharyngeal Defects	6

ing), the muscle is detached from its sternal, costal and clavicular origins, and lastly, from the humerus and deltoid tuberosity. Many times, because of the length of the flap, the only attachment has been from the neurovascular bundle. With great care, the flap is passed into the surgical defect through the tunnel previously created when dissecting the medial flap, while saving the perforators for the deltopectoral flap. Initially the majority of the pectoralis major muscle was used with the flap, but later refinement in our technique has resulted in tailoring muscle bulk to our needs. The island paddle is sutured into the surgical defect, while its adjacent muscle provides carotid artery coverage. The donor defect is closed by wide undermining and advancing the medial and lateral chest wall flaps. Adequate drainage of this is accomplished with the use of two hemovac drains, one under the medial and the other under the lateral chest wall flaps.

A major advantage is that the skin paddle may be tailored to fit the individual defect. The cutaneous portion of the flap may be split to line both intraoral and cutaneous defects. Also, the bulk of muscle transferred may vary from a thin vascular pedicle to a large muscle mass.

Results

Table 1 demonstrates varied applications of the PMM flap in our series.

The following cases have been selected to illustrate major advantages as well as complications of the PMM flap (Table 2).

Patient No. 1 is a 44-year-old white woman with a T₂N₀M₀ squamous cell carcinoma of the

TABLE 2

SUMMARY OF EXPERIENCES WITH PECTORALIS MAJOR MYOCUTANEOUS FLAPS

Patient	Age/Race/Sex	Diagnosis	Operation	Complication	Comment
1	44/W/F	T ₂ N ₀ M ₀ sq. cell ca. of anterior floor of mouth	Resection of floor of mouth in continuity with lt. radical neck dissection and rt. suprahyoid neck dissection. Reconstruction with PMM flap	None	Entire pectoralis major muscle taken which made a bulky neck flap
2	58/B/M	T ₃ N ₂ M ₀ sq. cell ca. of rt. retromolar trigone, rt. tonsillar fossa and soft palate	Mandibular osteotomy with resection of rt. retromolar trigone area, tonsillar fossa, soft palate and rt. radical neck dissection	Chest wall infection from ascending infection from hemovac tubing; orocutaneous fistula	PMM flap remained viable after operation and radiotherapy
3	46/W/M	T ₃ N ₀ M ₀ sq. cell ca. of rt. tongue	Rt. hemiglossectomy with rt. radical neck dissection. Reconstruction with PMM flap	Orocutaneous fistula	Patient had adult onset diabetes mellitus; coronary atherosclerosis S/P four vessel coronary artery reconstruction
4	61/W/M	T ₃ N ₀ M ₀ sq. cell ca. of rt. soft palate, retromolar trigone and buccal mucosa	Rt. hemimandibulectomy with resection of retromolar trigone areas, tonsillar fossa and soft palate. Reconstruction with PMM flap	Nasal speech and problems with deglutition	Deglutition and speech improved with obturator. One third of flap encroached upon aponeurosis of abdominal wall flap. Flap was flipped rather than rotated
5	66/W/M	T ₃ N ₂ M ₀ sq. cell ca. of lt. tonsil, retromolar trigone and lt. tongue	Lt. hemimandibulectomy with hemiglossectomy and lt. radical neck dissection. Sacrifice of lt. carotid artery. Reconstruction with PMM flap.	Hematoma postoperatively which was drained	Had skin paddle split and doubled on itself for coverage lt. intraoral defect and skin coverage
6	47/B/M	T ₃ N ₂ M ₀ sq. cell ca. of rt. tonsil, soft palate retromolar trigone area involving lateral pharyngeal wall and base of tongue which crossed the midline	Total glossectomy with rt. posterior palatotomy, rt. hemimandibulectomy and rt. radical neck dissection. Reconstruction with PMM flap	None	Postoperative radiotherapy and chemotherapy. Expired with recurrent tumor
7	50/W/M	Recurrent T ₂ N ₀ M ₀ sq. cell ca. of rt. tonsil	Rt. mandibular osteotomy with resection of tonsillar fossa and rt. radical neck dissection. Reconstruction with PMM flap	Orocutaneous fistula that resolved	7,000 rads radiotherapy to initial primary

Table 2 (Continued)

Patient	Age/Race/Sex	Diagnosis	Operation	Complication	Comment
8	50/W/M	T ₃ N ₂ M ₀ sq. cell ca. of lt. tonsillar fossa, extending to base of tongue	Lt. mandibular osteotomy with resection of lt. tonsillar fossa, lt. hemiglossectomy and lt. radical neck dissection. Reconstruction with PMM flap	Orocutaneous fistula and osteomyelitis of mandible resolved	Flap remained viable
9	61/W/M	T ₄ N ₂ M ₀ sq. cell ca. of lt. lateral pharyngeal wall	Partial pharyngectomy with lt. radical neck dissection and resection of skin involved with tumor. Reconstruction with PMM flap.	Superficial wound infection	Recurrence to skin
10	59/W/F	T ₃ N ₁ M ₀ sq. cell ca. of rt. retromolar trigone, tonsillar fossa and palate	Rt. hemimandibulectomy with hemiglossectomy, resection of rt. tonsil, soft palate and retromolar trigone area, and rt. radical neck dissection. Reconstruction with PMM flap	None	
11	59/W/F	T ₃ N ₂ M ₀ sq. cell ca. of lt. retromolar trigone area extending to soft palate.	Lt. partial mandibulectomy with resection of lt. soft palate, retromolar trigone, and lt. radical neck dissection. Reconstruction with PMM flap	None	
12	46/W/F	T ₃ N ₂ M ₀ sq. cell ca. of lt. tonsil	Resection of lt. base of tongue, tonsillar fossa, soft palate, posterior pharyngeal wall, cervical esophagus. Reconstruction with PMM flap	Orocutaneous fistula, necrosis of wound edges	Loss of 25% of skin paddle
13	77/W/M	T ₃ N ₁ M ₀ sq. cell ca. of rt. buccal mucosa	Rt. mandibulectomy with rt. radical neck dissection. Reconstruction with PMM flap	None	
14	45/W/F	T ₃ N ₂ M ₀ sq. cell ca. of lt buccal mucosa	Resection of lt. buccal area of face with lt. superficial parotidectomy and lt. radical neck dissection. Reconstruction with PMM flap	None	
15	44/B/F	Undifferentiated adenocarcinoma of lt. parotid with skin metastasis	Lt. total parotidectomy with facial nerve sacrifice and lt. radical neck dissection. Reconstruction of skin defect with PMM flap	None	

Table 2 (Continued)

Patient	Age/Race/Sex	Diagnosis	Operation	Complication	Comment
16	80/W/M	T ₄ N ₂ M ₀ sq. cell ca. of lt. buccal mucosa, inferior alveolar ridge and soft palate	Lt. hemimandibulectomy with full thickness excision of lt. cheek and lt. radical neck dissection. Reconstruction with PMM flap skin on face and STSG on muscle to form buccal mucosa	None	Recurrent tumor
17	70/W/M	T ₃ N _{2b} M ₀ sq. cell ca. of lt. supraglottic larynx with skin involvement	Total laryngectomy with lt. radical neck dissection and PMM flap to skin defect	None	Coronary atherosclerosis with arrhythmia
18	65/W/M	T ₃ N _{2b} M ₀ sq. cell ca. of posterior lateral pharyngeal wall to base of skull	Mandibular osteotomy with resection of lt. lateral pharyngeal wall from pyriform sinus to base of skull. Closure with PMM flap	Orocutaneous fistula with necrosis of 40%-50% of PMM flap. Felt secondary to stretching length to reach base of skull.	Recurrent tumor. Postoperative radiation therapy
19	72/W/M	T ₃ N ₂ M ₀ sq. cell ca. of larynx with neck metastasis two years post-laryngectomy with skin involvement.	Rt. radical neck dissection with removal of skin. Reconstruction with PMM flap	None	Preoperative radiation therapy
20	41/B/F	T ₄ N ₂ M ₀ sq. cell ca. of hypopharynx, larynx, soft palate	Rt. radical neck dissection with laryngectomy, subtotal pharyngectomy and partial palatotomy. Repair with PMM flap	Orocutaneous fistula, healed with conservative treatment	Preoperative chemotherapy and x-ray therapy
21	55/W/M	T ₃ N _{3a} M ₀ sq. cell ca. of larynx with skin involvement	Total laryngectomy, rt. radical neck dissection with skin removal and PMM flap for skin reconstruction	None	
22	55/W/M	T ₂ N ₁ M ₀ sq. cell ca. of anterior floor of mouth	Lt. radical neck dissection with rt. suprahyoid neck dissection, and complete excision floor of mouth 3rd molar to 3rd molar. PMM flap for defect reconstruction	Orocutaneous fistula healed two weeks postoperatively.	Good tongue mobility
23	45/B/M	T ₃ N _{3b} M ₀ sq. cell ca. of anterior floor of mouth	Lt. radical neck dissection, rt. suprahyoid neck dissection and excision floor of mouth with 30% segmental mandible. Reconstruction floor of mouth and 40% of anterior floor with PMM flap	Massive postoperative swelling with viable flap	Radiation failure with 6,000 rads

left anterior floor of mouth, which appeared to cross the midline. The patient had a resection of the anterior floor of the mouth in continuity with a right suprahyoid neck dissection and a left radical neck dissection. After the intraoral defect was closed with a PMM flap, the patient had good tongue mobility and deglutition. Her speech was defined as satisfactory, and she is free of disease at ten months.

Patient No. 2 is a 58-year-old black man with a $T_3N_2M_0$ squamous cell carcinoma of the right retromolar trigone area, right tonsil and soft palate. This was resected through a mandibular osteotomy in continuity with a right radical neck dissection. The defect was closed with a PMM flap. Postoperatively the patient developed a massive chest wall infection as a consequence of an ascending infection from the hemovac tubing, which was treated with irrigation and drainage, vigorous local therapy and appropriate antibiotic management. The myocutaneous flap developed a superficial slough, but the bulk of the flap remained viable. The slough area later reepithelialized.

The patient also developed an orocutaneous fistula at the osteotomy site, which later required excision and primary closure. After an adequate healing period he received postoperative radiotherapy and at nine and one half months is free of disease.

Patient No. 3 is a 46-year-old white man with a $T_3N_0M_0$ squamous cell carcinoma of the right tongue. He has adult onset diabetes mellitus which is being managed with diet control and chlorpropamide (Diabinese), and also has a history of coronary atherosclerotic heart disease which had previously required a four-vessel coronary artery revascularization procedure. Following a right hemiglossectomy in continuity with a right radical neck dissection, the tongue and floor of mouth defect were reconstructed with a PMM flap. The patient developed a small orocutaneous fistula which required a secondary procedure for closure, but he has excellent speech and deglutition and is free of disease at 15 months.

Discussion

The PMM flap appears to be an effective alternative to other modalities such as the deltopectoral flap, forehead flap, the nape of neck flap, and other local flaps that have been used in the past. The axis of the flap is the mid-clavicle, and the arc is such that the temporal fossa, orbit, and

posterior aspect of the neck to the midline or the contralateral aspect of the neck may be resurfaced. With the proper patient selection it can provide bulk tissue to such areas as the floor of mouth and pharynx, not only improving deglutition and speech, but providing needed carotid artery coverage and an acceptable cosmetic result as well.

Our patient population at the City of Memphis Hospitals and the Veterans Administration Medical Center generally have large, aggressive lesions. Their nutritional status is usually marginal; generally they have associated illnesses such as diabetes and atherosclerosis (patient No. 3). We have seen this flap survive massive infections (patients No. 2 and No. 12). To date we have lost no flaps, and feel that with proper tissue handling to prevent kinking and thrombosis of the vascular supply, the paddle should remain viable. One of 23 flaps had 40% to 50% necrosis which we felt was secondary to stretching its length to the base of the skull.

The ideal defects to reconstruct appear to be in the floor of mouth, anterior tongue, the buccal area, and any area in the face and neck which needs skin coverage. Lesions with the greatest complications are the oropharynx, soft palate, and cervical esophagus. For wounds that appear to be closed under tension or are at a high risk for fistulization, a controlled fistula is still advocated.

Biller and Baek⁷ have stated that the incorporation of rib into the flap has met with poor success because of its poor vascular supply. They have also shown that extra length to the paddle can be gained by extending the incision into the aponeurosis of the abdomen.

We feel that the PMM flap will become the work horse flap for future head and neck surgeons, just as the deltopectoral flap was for past generations of surgeons.

REFERENCES

1. Ariyan S: The pectoralis major myocutaneous flap. *Reconstr Surg* 63:73, 1979.
2. Baek S, Biller H, Krespi Y, et al: The pectoralis major myocutaneous island flap for reconstruction of the head and neck. *Head and Neck Surg* 1:293-300, 1979.
3. Bakamjian VY: A two stage method for pharyngoesophageal reconstruction with a primary pectoral skin flap. *Plast Reconstr Surg* 19:355, 1957.
4. McCraw JB, Dibbell D: Experimental definition of independent myocutaneous vascular territories. *Plast Reconstr Surg* 60:212, 1977.
5. McCraw JB, Dibbell DG, Carraway JH: Clinical definition of independent myocutaneous vascular territories. *Plast Reconstr Surg* 60:341, 1977.
6. Grant JC: The upper limb, in Grant's *Atlas of Anatomy*, ed 5. Baltimore, Williams and Wilkins, 1962.
7. Biller HF, Baek S: Pectoralis major myocutaneous island flap in head and neck surgery. *Arch Otolaryngol* 107:23-26, 1981.

More on Annual '81

JOHN B. THOMISON, M.D.

It's hard to get cranked up to write an account of a meeting after you've already spilled the beans on the big news (*J Tenn Med Assoc* 74:608-609, Aug 1981). The big news, of course, was the reorganization—or perhaps better, the redirection—of the AMA, with attempts to knock off three councils and ultimately the termination of one. Since that one was mine, all other news pales by comparison, but some other things happened which will, or at least may, affect you, and the show must go on, so I'll choke back the tears and sock it to you.

To start things off, I'll recite some old news that I'm sure you already know about. Your new President, replacing Bob Hunter, is Dan Cloud, an Arizona pediatric surgeon, and elected your President-Elect, after a hard fought campaign against no one in particular, is Bill Rial, the very effective previous Speaker of the House from Pennsylvania. Replacing Lowell Steen, who has decided to run for president next year, as Chairman of the Board of Trustees is Joe Boyle, from Los Angeles. So much for the introductions. Jim Sammons continues to run things.

I'm going to let that last statement stand, but I have to qualify it by assuring you that neither Jim Sammons nor the Board find the sailing totally clear, since the House of Delegates is always looking over their shoulder. It is a good arrangement, as the House certainly would not want to run things day to day, and neither would the Board. Although it is hard (would you believe impossible?) to keep everybody happy, the arrangement generally works well.

In the reference committee on amendments to constitution and bylaws, continuing scrutiny of specialty society representation in the House of Delegates engendered a request that the Board of Trustees review the objectives and criteria by which specialty societies are granted representation in the House. Particular attention was to be paid the total number of members, the total number of physician members, and the total number of AMA members in the specialty soci-

ety before any additional specialty society is considered for representation in the House of Delegates. There is concern that since the House is becoming so large as to be unwieldy, mechanisms to increase its size further should be examined with great care.

One of the items which caused a lot of controversy was the matter of direct membership in the American Medical Association, bypassing local and state societies. Concern was expressed that this would have an adverse effect on the federation by causing a decline in membership in these other organizations. The Council on Long Range Planning and Development and the Board of Trustees expressed the opinion that on the contrary this should strengthen state and local organizations by increasing the membership, since the drive for AMA membership would be conducted through the federation, with AMA underwriting part of the cost involved in the soliciting of all physicians in the state. Report A of the Council on Long Range Planning and Development was therefore adopted, and the Board of Trustees was directed to report to the House after three full years' experience with direct membership, providing a full review and reappraisal of the program. It was the feeling of the majority of the House that since the percentage of physicians who belong to the AMA is declining, a trial of direct membership would be worthwhile.

With the discontinuance of the Council on Continuing Physician Education, and the relegation of its function largely to the specialty societies, concern was expressed that the AMA was now abandoning its role as a scholarly organization. Resolution 70 reads:

RESOLVED that the American Medical Association continue to provide programs of continuing medical education involving direct teacher-student interaction; and be it further

RESOLVED that the AMA remain eligible for accreditation as a national organization to offer continuing medical education.

Although this resolution was adopted, it contains no direction for implementation, and at present no mechanism exists for the Association to follow the instruction of the House. The final program planned by the Council on Continuing Physician Education will be in conjunction with the annual meeting of the Southern Medical Association in November, and the staff members charged with carrying out the programs of the Council have left the Association for other employment.

Much of the work of the Council of Medical Education has addressed the continuing problem of education of physicians in foreign schools and methods of absorption of those physicians into medical practice in the United States. There is an obvious contradiction in setting high standards for the operation of medical schools in this country and the performance of their graduates, and at the same time making it a relatively simple procedure for considerably less well educated and trained physicians to form a significant proportion of the physician population in this country. The manner in which this problem should be addressed has been the source of much debate. Although it is obviously desirable that foreign medical schools be evaluated in the same way our own schools are, the Federation of State Medical Boards, which is the logical arm to accomplish this, sees almost insurmountable obstacles in doing so.

Although it is immediately apparent that many of the established schools are comparable in every way to our own, numerous schools have sprung up in which there is not only insufficient didactic instruction, but also where, because the low patient population, there is opportunity for even less satisfactory clinical experience. Graduates of such institutions therefore arrive here insufficiently prepared for the responsibilities which are a part of their postgraduate training as house officers. This problem was addressed in Report D of the Council on Medical Education which recommends a series of changes in the regulations for the fifth pathway procedure through which foreign medical students enter training in this country. It also recommends that AMA support the principle that any existing or proposed alternative programs by U.S. medical schools to facilitate entry of U.S. citizens studying in foreign medical schools into U.S. programs assure that those who complete such programs be reasonably comparable to the

school's regularly enrolled and graduated students.

The matter is further addressed by Report F of the CME, which recommends that:

The AMA support the practice of U.S. teaching hospitals and foreign medical educational institutions entering into appropriate relationships directed toward providing clinical educational experiences for advanced medical students who have completed the equivalent of U.S. core clinical clerkships. Policies governing the accreditation of U.S. medical education programs specify that core clinical training be provided by the parent medical school; consequently, the AMA strongly objects to the practice of substituting clinical experiences provided by U.S. institutions for core clinical curriculum of foreign medical schools. Moreover, it strongly disapproves of the placement of any medical school undergraduate students in hospitals and other medical care delivery facilities which lack educational resources and experience for supervised teaching of clinical medicine.

Of equal importance is the matter of examination for licensure of graduates of medical schools of the United States. Licensure has depended for a number of years upon a three part examination by the National Board of Medical Examiners. In 1968, the Federation of State Medical Boards promulgated a Federation Licensing Examination (FLEX) on the grounds that it would establish more uniformity in the licensure procedures throughout the country. This subject is addressed in CME Report A, which because of its potential impact on medical education will be published in a subsequent issue of the *Journal*. It is particularly important, since although the Federation has heretofore acted in consultation with the other involved organizations, particularly the AMA and the American Association of Medical Colleges (AAMC), in April of this year the Federation unilaterally adopted FLEX I and II as the accepted examinations for licensure. This creates difficulties, since the FLEX II examination will be given at the time of graduation, and should a student fail to pass the examination, he will be ineligible for postgraduate training; since the examination will be given between the matching and the beginning of the housestaff training, the process can be predicted to wreak havoc with the internship matching program. It is the general feeling that this procedure places too much emphasis on a single examination, and that alternative methods should be offered. The report was adopted by the House only with the understanding that the Board and the Council would continue to negotiate with the Federation to amelior-

AMA HOUSE ACTIONS/Thomison

ate their position.

The Council on Long Range Planning and Development has formulated in its Report D a detailed examination of the environment AMA will face in the near and long-term future, including the economy, population, legal environment, regulation, manpower, and technology. Though this report is quite lengthy, containing as it does a wealth of information which should assist in making projections of any kind it will be published subsequently in the *Journal*.

By adopting Report A of the Council on Medical Service (CMS), the AMA went on record as supporting the concept of voluntary locally based health planning, defined as a formalized activity originating from the expressed will of the community without statutory mandates. Such planning would be a structured process of determining appropriate community health and medical needs and priorities, leading to the development of allocation resources to meet those needs. Report A proposes a series of guidelines for use by medical societies at the state and local levels to use when initiating or participating in the development of health planning programs at the community level. The House urged that this report receive wide distribution, and so we will publish this report in a subsequent issue of the *Journal*. We will also publish a companion piece to this, Report B of the CMS, which provides information and suggestions regarding the functions of a voluntary community-based health planning organization, the society's role in voluntary planning, evaluation of the planning program, and funding options.

The matter of PSROs as always reared its head, but since the demise of the federal PSRO program under the present administration seems inevitable, the House adopted Substitute Resolution 4, which says:

RESOLVED, That the American Medical Association take a leadership role in collaboration with all units of the federation in developing and promoting effective means of physician assessment of the quality of medical care regardless of the future fate of PSROs; and be it further

RESOLVED, That physicians maintain control and direction over peer review and that peer review be done only by physician sponsored organizations regardless of the funding source for such review and that the AMA notify all agencies involved in medical peer review of this resolution; and be it further

RESOLVED, That physicians, acting through their state medical associations, provide for protection of the confidentiality of existing data accumulated for PSRO regardless of the future fate of PSRO; and be it further

RESOLVED, That the Council on Medical Service submit a report of progress on the implementation of this resolution at the 1981 Interim Meeting.

In addition, Resolution 60 makes it plain to all involved agencies that medical peer review will be done only by physician sponsored organizations.

HMOs also came in for the usual number of resolutions and amount of discussion, but what was passed was essentially a reaffirmation of the Association's previous stand that they not be federally subsidized nor given any unfair advantage over competing forms of medical care.

Two government agencies, the Federal Trade Commission and the Food and Drug Administration, received their usual attention. The House adopted Resolution 114, which asks that the AMA support H.R. 3722, a bill limiting the Federal Trade Commission's activities towards the professions. With the aversion of the present administration and Congress towards overregulation, it would appear that the impact of the FTC on medicine will be considerably blunted if not removed.

Resolution 29 urges a delay in implementation of the FDA's patient package insert program until it has been evaluated and its needs proven. The program has already been delayed, and subsequent events would suggest that the delay may be permanent, as there is reason for doubt that the inserts will ever be heeded or even read. Resolution 116 urges acceleration of the FDA drug review process as it applies to "adequate evidence of effectiveness"; it also urges involvement of practicing physicians in this review process.

There have recently been concerted efforts by the Office of Management and Budget to abolish the United States Public Health Service Commissioned Corps, which since its inception in 1876 has consistently contributed most of the professional expertise and leadership necessary for the service to carry out its mission. It has been crucial to national health efforts such as disease surveillance and control, health promotion, medical research, and the provision of health service to special population groups such as the American Indians and Alaskan Natives. Resolution 5 indicates there is little evidence that such efforts are

either intended, or would serve, to reduce federal government expenditures or employment, and since the abolition of the service would seriously jeopardize the ability of the USPHS to carry out its responsibilities, the House adopted the resolution "that the American Medical Association strongly support the continuation of the Commissioned Corps of the United States Public Health Service."

As usual, the Council on Scientific Affairs was busily turning out valuable scientific reports, and we will carry a number of these in future issues of the *Journal*. Adopted with Report C, which responded to Resolution 36 (A-80), and is entitled "Drug Abuse Related to Prescribing Practices," was Resolution 111, which speaks to the use of addictive medication in the terminally ill. It came from the American Psychiatric Association, which with other medical specialties is interested in the issue because of the physician responsibility in managing pain. A significant percentage of terminal cancer patients experience severe, constant pain, often unresponsive to traditional analgesic medication. In spite of this, some groups and agencies oppose the use of addictive medication in terminal cancer patients, partly because of concerns about diverting addictive medications from legitimate uses to abuse by addicts. The House therefore resolved "that the American Medical Association endorse the principle that the management of pain relief in terminal cancer patients should be a medical decision and take priority over concerns about drug dependence." Report C will be published in a subsequent issue with minor emendations.

Present medical and surgical technology has led to a demand for ever-increasing numbers of donor organs. This was dealt with previously by the CSA in their report D (I-80) but the matter of organ donor recruitment was postponed until a separate report could be issued. This important matter is dealt with in CSA Report D, which will be published subsequently in the *Journal*.

Also to be published subsequently is a brief report on acupuncture, CSA Report G, and a rather exhaustive report entitled "Electronic Fetal Monitoring," CSA Report H.

Hidden away within Board of Trustees Report C, having to do with AMA functions, activities, and resource needs (the reorganization of the AMA, in short), is a recommendation to "develop alternatives to the present interim meetings that would be less costly, but would preserve

member participation in the AMA's policy process." The House took rather strong exception to the suggestion that the interim meeting be discontinued, first on the grounds that the weight of material presently handled at the two sessions if compressed into a single meeting would extend its duration to well over a week. In addition, the House expressed its reluctance to remove itself from the operation of the Association for such a protracted period. What it finally approved was a request that the Board of Trustees "study and present alternatives to the present interim meeting, but that the interim meeting is to be preserved, and any modification thereof should preserve member participation and the intent of the interim meeting, while at the same time reducing cost to the AMA members of the federation." The House made it abundantly clear that it had no intention of relinquishing its prerogatives, or of diluting the democratic process under which the Association presently operates.

This moves me to climb onto my soapbox on behalf of the AMA. Those physicians who claim they have no voice in organized medicine are simply indicating that they are too lazy or too unconcerned to exercise their prerogatives. While it is true not every physician can speak on the floor of the House of Delegates, every physician who takes the trouble to join has a voice in who those delegates are. Even better than that, though, *any* physician who will take the trouble to register at any of the AMA meetings can say whatever he wishes, within the bounds of propriety, in any of the reference committees. Therefore, to say you have no voice is to say you want no voice.

This goes not only for practicing physicians, but for medical students and residents as well. It seems as if at least a quarter of the resolutions considered by the House were churned out by the Resident Physician and Student Sections at their meetings just preceding the convening of the House. The weight of paper generated by those meetings is evidence not only of the increased student and resident concern and participation, but of their freedom of participation.

If you have something to say that you think organized medicine needs to hear at the national level, join us in Las Vegas next month, or in Chicago next June, and speak your piece. But never say you have no voice in organized medicine. To do so is "to speak with forked tongue."



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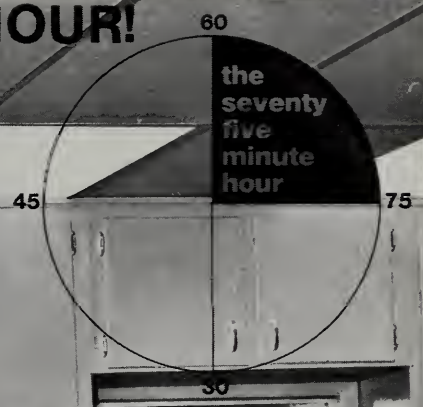
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Medical Care in the '80s

Quality Assurance

RICHARD THOMPSON, M.D.
Member of the Board
Joint Commission on
Accreditation of Hospitals

I want to clarify at the outset that I am just a malassigned pediatrician, a kind of intruder in this field of cost, quality, and professional performance, but I am having a ball! I'm involved in a variety of areas that seem very relevant to patient care, especially the doctor taking his patient to the hospital. So when we talk about quality assurance I like to start where a physician's thoughts are. I would like to share with you an impression of what doctors these days think about quality assurance. "I believe," says a letter I received, "that most physicians, especially practicing physicians, look on quality assurance as a pain in the rear end and a task that we do because the government insists." I do not think at all that is a bad thing to have thought about quality assurance, considering that, in my opinion anyway, quality assurance, as we lived through it in the 1970s, was a complete distortion of a basically good idea.

That distortion had several components, and I will just mention three of them. One, in the 1970s, was a procedure called medical audit. In the middle '70s, when I was chief of pediatrics at the medical center in Columbus, Ga., some of the doctors were interested in what this audit requirement would do to us. So we asked for a description of it, and were told, "That's really easy to describe, and we're so glad you're interested and want to participate. The simplest way to define audit is that it's a mechanism whereby

you pull patient records with the objective of finding inefficiency and taking corrective action. That's what it is. By the way you will have to do this at least 12 times a year if you are a big hospital, and 'they' will not count it as complete until, at the end of the study, you have at least two heads of doctors on a silver platter." That is the definition of a completed audit.

They said, "Do you want to play?" We said, "No, I really think we'd rather do some other things. I'm expecting a new group of students from the Medical College of Georgia. We're giving them core curriculum pediatrics. I've got galley proofs on my desk of the article on the impact of our perinatal mortality in an eight-county area. I've got a group of housestaff waiting to make rounds. Dr. Cabaniss, the internist, and I have to go again to the board of the hospital and fight about whether he gets a coronary care unit before I get a pediatric intensive care unit. And we can think of many, many issues to occupy our time other than learning to do an audit and what you're talking about." There was the distortion.

The second component of quality assurance that was not a bad idea to start with, but became distorted over the years, was medical staff organization and committee work. There is a basic need for medical staff organization and committee work. For example, an attorney and I just put together a manual. You may find me dead in an alley some day, but it is going like hotcakes. The manual is called "Ten Tough Questions About Hospital Privileges." There is nothing basically wrong with the idea that a medical staff has to be organized to perform certain basic functions, such as answering the question, "Can Dick

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Thompson roar into town and be on our medical staff? Or should we really find out if he really finished at Vanderbilt and went on to Washington U. and really trained in pediatrics at Denver Children's and is doing neonatology on the basis of a fellowship and good experience, or not." Well, some of us think the answer to that is, "That makes sense, even though it's required."

There was, recently, in the March 1981 issue of *Surgical Rounds* a lovely little two-page article by Dr. Mark Ravitch, professor of surgery at the University of Pittsburgh. Dr. Ravitch goes through a very interesting discussion of how the Joint Commission came to his hospital. He said, "Each week I conduct..." and described the activities of a good chief of surgery. He described intensive review and study of deaths and untoward circumstances—you know, mortality and morbidity conferences. He described clinical conferences, case presentations, and rounds—walking rounds once a week in which several patients are presented to him, and at least one house officer present at every operation. Then he says, "In spite of all this, the Joint Commission said, 'Big Gig; you don't have an active tissue committee.'" So, he said, "When people say 'If you want to be accredited and reimbursed, you have a tissue committee,' what do you do? You establish a tissue committee." Then he said, "We formed one and I pulled some records and I prepared a report and my secretary typed it and we spent photocopying money for 12 copies and we brought a committee together and we had lunch at the expense of the hospital and discussed the cases and they voted to tell me to prepare the reports that I had already prepared and then I took copies to administration and they put it in a stack of records to be presented before the inspectors at their next visit." Dr. Ravitch ends his article, "How long, Oh Lord, how long?"

You will be interested to know that I am here this afternoon to give you good news. On April 25, 1981, a date I predict will be historic, the Joint Commission board directed their staff to revise the JCAH standards manual. Thank God! It is the worst example of the English language extant, and they said "revise." Rewrite is not the word; their intent is to clarify and simplify, *without* omitting reasonable requirements. Dr. Ravitch must have gotten the attention of the Joint Commission!

I would like to discuss the third component we lived through in the '70s, a wonderful program

called "utilization review." When you asked about this, they said "Yes, the assumption of utilization review is two things. The first assumption is that the total definition of quality care is average length of stay. If you can reduce the length of the stay two-tenths of a day, you have really improved care. The whole system is based on addressing the most frequent cause of long length of stay in the hospital and overutilization: doctors who are either too lazy and careless or else downright fraudulent and abusive and just don't know when to send a patient home."

We said, "Fine, that sounds good. That's really a wonderful idea. Quality assurance sounds like a real boon for the American patient, taxpayers, physicians, and hospital personnel." We tried to tell the feds for a few years that their basic assumptions were wrong. I am not saying there is no value in average length of stay data. I am just saying that average length of stay as a total definition of quality assurance is one of the biggest hoaxes anybody ever tried to pull off. Without the interest, I think, and participation of some interested physicians it would have worked. The government and Blue Cross would have had a real feather in their caps.

But I would say, let me tell you how stupid that is. If I had crushing chest pain right now, my wife, who will fly in from Chicago, is going to have some questions. With me in the coronary care unit and my wife concerned about the kind of care I am getting, tell me how many of you really think my wife's very first question will be, "What's your average length of stay for heart attacks?" You know, it just does not happen. I told them, "I've got a boy at home. He's 17. When he goes over to his girlfriend's house, what happens while he's over there is a lot more important than how long he stays." And you do not have to argue cost or quality. That is true whether you are worried about what it might cost or whether you are trying to help him with quality.

We have been trying to say for some time that if we could just introduce some common sense into the distortions of quality assurance of the '70s maybe we could get somewhere, particularly with physicians. I have told others that the medical audit days of the '70s had zero impact. If I go into a hospital and say, "Now that you don't *have* to do it 12 times a year, are you going to do it 12 times a year?" Most of them answer, "No, we don't see any need to do our 12th annual cholecystectomy audit, because we were just

doing it because it was required.”

When I say, “You’re never going to do an audit again?” they answer “*We didn’t say that.* We will do ‘audits’ when we *need* the resulting information. For instance, if you come roaring in here, Dick, to try to be part of our medical staff, we will initially give you provisional privileges. Not because we don’t trust you; it’s just because we have to award privileges on the basis of your track record elsewhere before we give you permanent privileges to do tertiary care neonatology. In spite of all your training and experience elsewhere, we will want to take a look at your track record for six or eight months before we say you can be a neonatologist at our place. And, when we do that, we’ll do an audit. We’ll talk about indications and use of drugs and that sort of thing. It makes more sense to *use* audit when we need to rather than doing it 12 times a year because we have to.”

Reasonable physicians have never opposed the basically good idea of effective patient care and assumption of clinical responsibility with an eye on cost effectiveness. But reasonable physicians have every right to oppose the *distortion* of good ideas such as busy work and average length of stay as the total definition of patient care. We were right in saying that we are not going to participate unquestioningly in busy work based on erroneous assumptions which can lead to unfounded conclusions that are not clinically valid and will waste money and result in unfair sanctions against physicians. But we would be *glad* to participate in the kind of program that really produces evidence of effective patient care and improvements where they are needed.

The evidence that physicians have never opposed such a concept is to be found in a one-page statement that a group of surgeons set down, starting with the question, “If I’m comfortable having my patient in this hospital, what might be the characteristics of that hospital?... There would be an organized medical staff. Membership on that staff would be restricted to people who are licensed in the state, of proven competence, and moral character.” There should be accurate, complete and legible medical records. (We have not made any progress in that one.) And they said, “Really, if we’re comfortable in this hospital, it ought to have a laboratory that does clinical work and not just research, and it ought to have a good radiology department that provides” — this will date it — “radiographic and *fluoroscopic* services.” It makes sense that if a

hospital can meet that one-page standard, they can operate on my reconstructed knee any day. What do you think the date on that is? It is 1917! That is the American College of Surgeons’ one-page statement, written about the time of World War I. It is basically a good idea, but it has become distorted over the years.

If you want to take one note this afternoon, jot this down: in quality assurance, any date prior to April 7, 1979, is ancient history. Thank God, the things I have been describing to you are ancient history — the 12 audits, the negative approach, the assumption that people are fraudulent and abusive and careless. April 7 is the date that most of us working in quality assurance pick when we point to the paramount event that helped people turn things in a little more positive direction. That is the Saturday the Joint Commission board met in Chicago and wiped out the requirement to count audits.

Well then, what do surveyors look for? What kind of committees? Here is what it says: “An accredited hospital shall demonstrate a consistent endeavor to deliver patient care that is optimal within available resources and consistent with achievable goals.” (Statements of achievable goals are the “criteria.”) It does not say do 12 of this kind, do 12 of that kind, or have a committee. It says, “Show us a consistent endeavor related to patient care.”

If you want to write down a second note, you would write down, “Quality assurance, 1980 style, is not an extension of hospital management. *Quality assurance, 1980 style, is an extension of patient care.*” That is what the Joint Commission is looking for. So, if surveyors come to a hospital two years from now and say, “Show us your quality assurance plan,” we will show them a couple of sheets of paper and say, “That’s how we do it.” And they will say, “Fine, fine. What we’re really interested in is what’s better since we were here last time?” And we would say, “Well, a couple of doctors complained stat hemoglobins weren’t coming back fast enough. And, sure enough, a little study showed” — study is too complicated — “a little spot check showed that only 14% of stat hemoglobins were coming back in an hour. That’s not acceptable. Everybody in lab, nursing, the doctors and all who were involved agreed that the situation could be improved. So we, together, decided on the following four things: the lab techs said they’d add an ‘expedite category,’ and

assign a lab tech to pick up stats all day long; the nurses said they wouldn't wait until noon to take that order off the chart; and the doctors said 'If, while shaving, I suddenly remember that I forgot to order that test last night, I'll not call to order it stat just to get the results before going to the office.' And we all decided that if we considered ourselves part of the problem and did that, the complaint might get better. We're pleased to report to you, sir, that as a result of those actions, 89% of our hemoglobins ordered stat now come back within one hour." They are supposed to say, "Now, that's quality. What other kinds of issues do you have?" Now if you say, "Well, we've got a general surgeon here who's on his 39th straight normal appendix, but we were so busy with the stat hemoglobins..." then you're going to be in trouble. We *do* have to face up to what the problems really are.

How do you define "quality" and "assurance"? Assurance, in the context that we are talking about today, is a word that we should drop. The attorneys I work with say, "Assurance is too absolute. It sounds like 'guarantee.'" The law will settle for, patients will settle for, physicians will settle for, your hospital governing boards will settle for "*best possible within reason*." Why not do that? I wrote a little green manual that is *not* called "the quality assurance manual." It is called, "Next Steps in Implementing Hospital Quality Appraisal and Response Plans." We can promise to appraise patient care information and then respond to the findings. But we just have to get away from the negative approach that it is a legal issue, sometimes perpetuated by the word "assurance."

Quality is something that is well worth defining. I always get self-conscious at this point, because I have a son who has just finished his Ph.D., his doctorate in philosophy. You say "Doctorate of philosophy in what?" My son is a doctor of philosophy in philosophy. He has a job. He is going to be an assistant professor of philosophy this fall. So, I said, "Paul, please son, give me a definition of quality." And what do you suppose Paul told me? "Give up. People have tried it for centuries." And that is true! You know, the reason we get all wound up in this is that we try to make too much out of it. We say, "We can't start until we have a definition of quality that is acceptable to the academicians and the philosophers." There isn't one! What you must do is define quality *operationally*. Then you

must define a plan that appraises quality in all its aspects, and then evaluate your findings. You either use your findings to say "Oooh, we need to get together and improve this area," or you use your findings to get together and say, "Get off my back!" such as when overstated accusations of poor care hit the newspapers.

One of the first things that happened to me when I became interested in this field occurred when we went with a group to evaluate an HMO that was being accused of giving poor quality care. It is an issue that arises all the time. Turn it around, so that instead of overutilization, the question could be, "Are you underutilizing? We want to know." When we arrived in Indianapolis, they said, "There's a reporter coming out from the Indianapolis TV station and we want you to talk to her because they've obtained information showing that there is less surgery in HMOs than in a fee-for-service population. They want to make a big deal out of it and we don't want to get in the middle. You're from out of town and can say anything and then fly out."

I talked with this reporter, whose name was Jane Pauley. She was very tough and started in with this kind of question: "I guess you would assume that this is due to fee-for-service doctors doing too much unnecessary surgery."

I said, "Unnecessary surgery is a term I never use. I think other people overuse it." She said, "What?"

I said, "Well, take hysterectomy."

She said, "Yes, that's on the list."

I said, "Let me tell you about that term, unnecessary hysterectomy. I have not seen written, anywhere, a clear discussion for the government, the feds, or the mandators, that there are two kinds of pathology in medicine. One would be anatomic pathology and one would be physiologic pathology or endocrine pathology. It's just dumb, I think, to talk about unnecessary hysterectomy with the assumption that you've got to depend on an anatomic problem in the removed uterus before you can justify the operation. I know that as a doctor, and I also know that because my wife has had her uterus out for eight years. It was anatomically normal and life has never been better! I think one of our problems with quality is that we think of decision-making only as related to statistical significance and not also to individual clinical significance. What happens to the individual patients? How does it affect their lives?"

She said, "Cut! Cut! Cut! Thank you very much. Goodbye."

Redefining "quality" is making us realize a lot of things, including what a modern hospital really is.

Enlightenment about hospitals will come to anyone who recognizes and accepts the fact that hospitals now are complex organizations in the big business of supporting individuals who are delivering patient care to individuals. Once you can say that, you can draw a picture of the hospital and you can put in quality assurance. On one side you draw the nursing service, respiratory care, physical therapy, admissions, lab, and laundry all reporting to administration. On the other side you draw the medical staff, the individual attending physician and the medical staff-wide activities. Governing board accountability is put up on top and then you know what you have? You have all kinds of little dotted lines coming down to one place. And down here you draw what? *The patient!* What we are trying to provide are matters of communication, matters of attitude, matters of judgment; and if we appreciate that, then we are going to have less need for a risk management committee and a separate person called the risk manager who has a salaried position. We are going to have less need for medical staff committees to meet monthly and develop minutes. That, frankly, is what the Joint Commission has allowed us to do now.

The Joint Commission, whatever we think of it, remains the biggest single influence of what hospitals do. They have allowed us to achieve that kind of patient care-oriented management model for hospitals. We draw a dotted line back up to the governing board and medical staff and administration and we say quality assurance is communication at a cloudy level. People say, "But then, what does it control?" The answer is "Nothing!" The quality coordinating council that you should be developing in your hospital controls nothing. It is a dotted line group where trustees, the chief of staff, the administrator of nursing services, the administration, and a couple of department heads come together to discuss and solve patient care-related problems.

In summary, when we discussed quality as-surance in the 1970s, it was discussed primarily as an issue in response to external pressures. It became a regulatory issue, a legal issue, a response to Joint Commission requirements issue,

and an adversary issue. I am not saying those pressures are gone; do not misunderstand me. They are not ancient history. They are still with us. But, in addition, quality assurance is in transition and is being considered a very important factor in internal issues. Whether you are a 60-bed hospital with four people on the staff or whether you are a 600-bed hospital with 600 super specialists on the staff, whether you have a teaching program, whatever your "hospital mission" is, if I pick you to operate on my knee and you are too small to have some interest in the quality of what you are doing for a patient and how your patients are doing, you are too small to operate on my knee. Quality assurance, 1980 style, is not a program. Quality assurance as a separate program cannot long justify its existence. But quality assurance as a concept, as an aura of competence and caring, with enough documentation, involving hospital personnel and all concerned with decision-making as it affects the individual patient, is just beginning to have its day.

You have talked about some big issues today and there are lots of them. The issues facing us include cost of care, planning, hospital employed physicians, hospital privileges, risk management, recruiting, expanded roles of nurses, confidentiality, patient records, and quality assurance. And on and on. I have spent five years in hospital administration and have a lot of respect for administration people. The only quarrel I still have with them is that sometimes the most important issue is cost and the second most important is quality. If you want to write down another note about what we said this afternoon it is that, of all issues, quality is very, very important. It is not just important to me, the knee patient, it is important to you, the physician, as part of the hospital leadership.

Simply stated, emphasizing quality in hospitals in the 1980s is most important because, if the Japanese start shipping hospitals over here, we are in real trouble! If American car manufacturers have read *U.S. News and World Report*, *Fortune*, and similar journals, they have learned that the Japanese commitment to quality has been responsible for the trouble they have been having with the Japanese imports. Their commitment is not all altruistic and philosophical; it is also self-serving! Once we get the idea that a commitment to quality is self-serving we are going to succeed, because people will buy American as long as

their car does not fall apart. But when it starts blowing smoke they will say "Maybe I'm stupid to be buying American when the guy with his Toyota is tooling down the road getting 40 miles a gallon."

We have to reverse the image of what the American people think is going on in hospitals, because usually it is not true. It is the negative image that is overdone. I had an opportunity to talk to a group of trustees in Flint, Mich. It was terribly embarrassing. Usually, when I get to the rental car counter they say, "Is a Toyota OK?" and I say, "Sure, whatever you've got." So there I was. I am driving a Toyota in Flint, Mich., where the unemployment rate is 25%, and I am afraid I will get my tires slashed. Anyway, the session happened to be at the General Motors Institute. After the session a couple of people came up and said, "Say, what you're talking about sounds a lot like what the Japanese are doing with their product." And I said, "The Japanese? But I thought we did this in our country." A couple of people who did not want their names or company mentioned said, "Only one difference. In Japan, quality is first. In this country it seems as if quality control people are allowed to do anything within the context of no fewer cars a day rolling off the assembly line."

What I hope I have conveyed to you is the message that quality assurance, 1980 style, is not the negative, fearsome bugaboo that makes adversaries of us all, as much as it is a more positive patient care-related issue, effective implementation of which should not only assist our patients but help answer the question, "How do you spell relief?"

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The Nutritive Quality of Processed Foods: General Policies for Nutrient Additions

Maintenance of a well-nourished population requires the availability of a food supply providing essential nutrients in amounts sufficient to meet human needs. Appropriate selections from a variety of foods will help assure an adequate diet.

Should the nutritional quality of foods and beverages be insufficient to meet established needs, means are available to enhance their nutritional quality, e.g., by addition of specific nutrients.

In the United States, the Recommended Dietary Allowances (RDA)¹ provide a goal for good nutrition for the population and form a basis for quantitative considerations when improvement of the nutritive quality of foods is deemed desirable.

Classification of Foods

The rapid changes in technology make it difficult to classify food products. Foods can be classified as conventional or formulated, although these distinctions are arbitrary.

Conventional foods are considered to be traditional, primarily single entity foods, e.g., canned corn, milk. Formulated foods are mixtures of ingredients or foodstuffs (other than seasonings) that are processed or blended together and result in a single identifiable food item, e.g., meal replacers such as liquid meals and prepared breakfast cereals.

A formulated food may resemble a conventional food in physical characteristics or nutrient content (or both), as well as in its role in the diet, e.g., products that resemble bacon or cheese. Such foods may be simple substances, e.g., textured proteins of vegetable origin, but more commonly they are complex mixtures of ingredients.

For special dietary purposes, foods may be prepared by modifying conventional foods or by formulating foods to contain specified quantities of one or more nutrients or constituents. Examples of the latter include low-calorie foods, low-sodium foods, and foods for the patient with metabolic disorders, e.g., gluten-free foods. Foods for special dietary purposes are not the subject of this statement; however, many of the principles discussed here have application to special purpose foods.

Alteration of Nutrient Value

Addition is accomplished through the techniques of restoration and fortification. (A third term, enrichment, is frequently interchanged with the terms restoration and fortification.) *Restoration* is the replacement of lost nutrients. Since losses can occur in storage, processing, or handling, restoration helps assure that levels of nutrients present in the food are similar to nutrient levels present in the original product. Restoration of nutrients to foods is a method that can be used to help prevent nutritional inadequacies in the population. *Fortification* is the addition to a food of nutrients that initially were not present in the food or were present in nutritionally insignificant amounts. The nutrient content attained through fortification is often greater (both quantitatively and qualitatively) than that attained through restoration. Fortification is a technique that can be used when intervention is necessary to correct a demonstrated nutritional deficiency in an identified segment of the population.

Nutrient additions (defined as restoration and fortification) have been endorsed by the American Medical Association and the Food and Nutrition Board of the National Academy of Sciences/National Research Council. Practices in the United States that have been endorsed include the enrichment of flour, bread, degerminated cornmeal, corn grits, whole grain cornmeal, and white rice (with thiamin, riboflavin, niacin, and iron); the restoration of thiamin, riboflavin, niacin, and iron in processed food cereals; the fortification of milk, fluid skim milk, and nonfat dry milk with vitamin D; the fortification of margarine, fluid skim milk, and nonfat dry milk with vitamin A; and the fortification of table salt with iodine.

These practices are based on policies that have been in effect for many years. However, this listing should not be construed as all-encompassing. Other practices are currently under review.² Scientific data in the future may well demonstrate the need for use of other nutrient additions to assure adequate levels of nutrients.

Restoration

Good processing practices that conserve the nutritional value of foods are of particular importance and should always be a goal in the processing of food.

¹This is Council on Scientific Affairs Report E.

Some essential processing, however, can result in the reduction or loss of nutrients; where feasible, significant nutrient losses should be restored.

In restoration, the quantity of nutrients added is determined, in part, by knowledge of the nutrient content of the unprocessed food. The nutrient content of a food commodity may vary from lot to lot. Nutrient content can be made more uniform by adjusting the quantities of nutrients added to compensate for such variations.

Restoration to the original nutrient levels is recommended when (1) the original product is an important source of the nutrient; (2) the nutrient added is physiologically available and sufficiently stable that the nutrient value will be retained during the normal shelf life of the product. Reasonable excess would be permitted to compensate for storage losses; (3) the cost of nutrient addition is reasonable.

Fortification

The quantity of a nutrient added in fortification should be determined by considering the amount needed to meet the RDA for the population, the pre-fortification level of intake from all other food sources, and the anticipated daily consumption of the food that is to be fortified. Technological feasibility must also be considered. The nutrient intake from the total diet should be sufficient to meet the physiologic needs of the majority, while not containing amounts that might be excessive for those who may employ foods in varied patterns of use. The amount of nutrient added in fortification should raise total daily intake to approximate the RDA. Indiscriminate and excessive fortification should be avoided by appropriate limitation of the number of foods that serve as vehicles to carry a particular nutrient. Consideration must be given to the widely varying margins of safety of particular nutrients.

Implementation of sound fortification policies requires knowledge of national dietary patterns and of the nutritional status of the population. Thus, an urgent need exists for thorough and current analyses of variations in dietary patterns and nutritional status in the United States.

The following criteria should be the basis for consideration of fortification: (1) The nutrient under consideration for addition to food is judged to be significantly below the RDA in the diets of a substantial segment of the population. (2) The food that is to carry the nutrient is consumed by most individuals in the segment of the population in need. (3) The amount of nutrient added makes an important contribution to the total diet. (4) The addition of the specific nutrient does not create a nutrient imbalance. (5) The nutrient added is physiologically available and sufficiently stable that the nutrient value will be retained during the normal shelf life of the product. Reasonable excess would be permitted to compensate for storage losses. (6) There is reasonable assurance that exces-

sive intake (to a level that may be harmful) will not occur. (7) Any additional cost is reasonable for the intended population.

It should be noted that some of the criteria established for restoration and fortification are similar to those established for good manufacturers' practices or addition of substances to foods. Their restatement in this context emphasizes their importance.

Nutritive Quality of Formulated Foods

Formulated foods, being mixtures of two or more ingredients or foodstuffs (other than seasonings), include a range of products. Where food regulations permit, the principles of nutrient addition to formulated foods should be similar to those applied to other foods. When foods are formulated for special purposes or medical use, exceptions to these guidelines should be made when indicated.

When a formulated food replaces an identifiable dietary counterpart that is an important source of nutrients, it should provide those nutrients in amounts approximating those found in the food it is intended to replace. Selection of the types and amounts of nutrients used should be based upon the producer's suggested pattern of use, the stability of the nutrients in the food, and good manufacturing practices. The nutrient formulation may need to be revised if the pattern of use changes with time.

When a formulated food has no easily identifiable dietary counterpart that can serve as a prototype, decisions made regarding its appropriate nutrient composition become especially important. When these foods contribute 5% or more of the RDA for food energy in a serving, the concept of a calculated nutrient density can serve as a reasonable guide for nutrient additions. Nutrient density expresses nutrient content in terms of caloric (food energy) value and relates it to the values in a guide for nutrient intake, for example, the RDA. When applying this concept, a serving of food containing 200 kilocalories can be related to a calorie standard of 2,000 kilocalories/day. The serving represents 10% of the total caloric standard and might appropriately contain this percentage of each of the nutrients recommended in the nutrient intake guide that is used to calculate nutrient density.

A product designed as a meal replacer or one designed to be used as the primary item in a meal should provide the consumer with 25% to 40% of the daily allotment of nutrients. For practical purposes, the U.S. RDA³ could serve as an appropriate formulation guide since U.S. RDA provide for both adults and children under 4 years of age. Where recommendations exist for estimated safe and adequate intake of an essential nutrient for which there is no RDA,^{1 (p178)} the ranges provided can be used as a formulation guide for nutrient selection and levels of use. The contribution of food energy by the meal replacement should be determined by consideration of its intended use (e.g., a reduced caloric allowance for

weight control).

Prepared breakfast cereals are considered to be formulated foods. Because their primary use is as a breakfast entree, it is suggested that they may be formulated to provide up to 25% of the U.S. RDA per serving of the vitamins and minerals common to cereals. Here again, where recommendations exist for safe and adequate dietary intakes of nutrients for which there are no RDA, these recommendations may be used as a guide for formulation.

Infant cereals are introduced relatively early to the infant's diet. They can be a useful food for enhancing the nutritional content of such diets. For many years, infant cereals have been fortified with calcium, iron and the B complex vitamins. Fortification of other infant foods can be considered within the context of the guidelines established in this statement.

In keeping with the principles established for fortification, cereals could be considered as a carrier for a nutrient when a demonstrated need exists. There is no apparent health justification for fortification of cereals intended for older children and adults beyond 25% of the U.S. RDA for vitamins and minerals.

Food items not intended to be used as part of a meal (e.g., snacks) become nutritionally important when they contribute to the total daily intake and *displace* sources of essential nutrients in the diet. The nutritional improvement of such items should be based *only* on the general guidelines for fortification outlined in this statement and should be considered *only* when other vehicles to carry the nutrients are judged to be inappropriate.

The above statements of policy and of endorsement apply to conditions existing in the United States. Recommendations for additions of nutrients to foods used internationally should be based on assurance that similar physiologic or economic advantages will accrue to the respective populations.

Summary

The nutritional quality of foods and beverages can be enhanced by the addition of specific nutrients. In the United States, the RDA provide a goal for good nutrition and form a basis for quantitative considerations when improvement of the nutritive quality of foods is deemed desirable.

Addition of nutrients is accomplished through the techniques of restoration and fortification. Restoration of nutrients to conventional processed food helps assure that levels present in the food are similar to nutrient levels present in the original product and is a method used to prevent nutritional inadequacies in the population. Fortification is the addition of nutrients that initially were not present in the food or were present in nutritionally insignificant amounts. It is a technique that can be used when intervention is necessary to correct a demonstrated deficiency in an identified segment of the population.

Important guidelines for both restoration and for-

tification include considerations of stability and bioavailability of the nutrient to be added as well as reasonable cost. Guidelines for restoration require that the product be an important source of the nutrient to be restored. Guidelines for sound fortification policies require knowledge of national dietary patterns and of the nutritional status of the population. Thus an urgent need exists for thorough and current analyses of variations in dietary patterns and nutritional status in the United States.

Many formulated foods have easily identifiable dietary counterparts that can serve as guides for decisions on the addition of nutrients in conformance with the guidelines established in this statement. When foods have no easily identifiable counterpart, the nutrient density concept can serve as a reasonable guide for nutrient additions.

REFERENCES

1. *Recommended Dietary Allowances*. Washington, DC, Food and Nutrition Board, National Academy of Sciences, National Research Council, revised 1980.
2. *Proposed Fortification Policy for Cereal-Grain Products*. Washington, DC, Food and Nutrition Board, National Academy of Sciences, National Research Council, 1974.
3. Code of Federal Regulations, 21 CFR 101.9 (c) (7) (iv).

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Carcinogen Regulation

In recent months, policy decisions have been made in the federal regulatory agencies which outline new programs for the identification of carcinogens with the aim of eliminating them, if possible, from our environment. While there can be no objection to this goal, it is true that once a political-public-policy process of such magnitude is mounted it may be extremely difficult to change its course, even though evidence may become overwhelming that its cost may far outstrip any possible benefit.

News reports have claimed that 80% to 90% of all cancer may be due to environmental factors¹ and this has often been translated to mean the occupational environment. With this assertion in mind, the Council on Scientific Affairs, with the help of several expert consultants, has reviewed the basis for the progress of the federal carcinogen regulation initiative.

The earnest desire of the federal regulators to prevent as many cancers as possible cannot be put aside. Cancer is a major national health problem: one in five Americans can expect to die from some form of cancer. Furthermore, there can be little doubt that environmental exposure does account for certain cancers because of (1) the well-established relationship between the incidence of cancer (e.g., of the lung) and a known intensity of exposure (e.g., to asbestos fibers), (2) the unexplained differential in occurrence of certain forms of cancer (e.g., of the liver) between countries or between communities, and (3) the correlations that seem to be emerging between intestinal cancer rates and diet. Thus, the need for regulation of true carcinogens to which we may be exposed is not disputed, but the underlying premises and the proposed mechanisms of such regulation need to be carefully considered and, in some instances, refuted or revised.

Cancer Incidence

While it is true that cancer ranks second among the major causes of death in the adult U.S. population, death rates for this same population have been steadily falling in this century. More importantly, when the Surgeon General of the United States addresses the problem, using statistics from the National Center for

This is Council on Scientific Affairs Report A. This report is not intended to serve as a standard of medical care: standards of medical care which are determined locally and are constantly subject to change are established on the basis of all the several facts of the individual case.

Health Statistics, he points out that age-adjusted death rates for cancers of all types have increased slightly for men and decreased slightly for women.^{2,3} In terms of specific sites: age-adjusted mortality from cancers of the cervix, stomach, liver and rectum has shown a substantial decline; whereas that from cancers of the body of the uterus and the lung shows a significant increase. Mortality from cancer at most other common sites has shown little change over this interval, although a minor upward trend of uncertain significance has been suggested for cancers of the pancreas, ovary and bone marrow.^{2,3} Of course, it has been recognized for many years that most cancers of the lung and perhaps half of the cancers of the urinary bladder can be attributed to a single environmental agent, the cigarette, of which hazard the public is well aware.

It has been pointed out that since there is a long latency period of perhaps 20 years between exposure to a carcinogen and appearance of a cancer in man, the incidence of certain malignant diseases may actually be on the increase even though this may not be reflected in mortality rates. If confirmed, this increase may be the result of better detection, better treatment or better reporting as well as the possibility of an increased rate of carcinogenesis. While it is well documented that exposure levels of, for example, asbestos and chromate have been rising steadily and may yet account for a future increase in cancers, there is as yet no convincing increase in cancer incidence that parallels the rising industrial petrochemical pollution since 1950 in the United States.⁴

Cancer-Causing Agents and Carcinogenesis

In most higher forms of animals, tumors are a natural event and occur at a certain baseline frequency. A cancer-causing agent, or carcinogen, is defined as a substance which, upon administration, increases the incidence of all tumors, or of certain tumors, or shortens their time to appearance. There are many moderating factors, such as overcrowding, noise, altered immune systems, and stresses of various kinds that may influence a given assay. Such factors help to explain the considerable variation seen in animal experiments, except in those extreme circumstances where a maximum tolerated dose, a particularly potent carcinogen, or a particularly sensitive test animal may be used.

Carcinogenesis also can be stimulated by other

chemical compounds called co-carcinogens and cancer promoters as well as inhibited by anticarcinogenic agents. Permissive co-carcinogens may encourage the formation of a tumor by modifying the carcinogen, the responding tissue or one of the body's organ systems at the time of the carcinogenic action. A promoter, on the other hand, encourages dormant pre-cancerous cells to grow rapidly and become malignant at some time far remote from the time of the original carcinogenic insult. Although there is excellent experimental evidence to demonstrate the action of promoters on carcinogenesis, it is not always easy to make the distinction in practice and the universality of promotion in carcinogenesis remains in doubt.⁵

Very little is known of the molecular events that transform a normal cell into a cancer cell, capable of wild uncontrollable multiplication. A carcinogen entering an animal may undergo metabolic alterations before reaching a target cell. Such a target cell may be more or less susceptible to cancerous transformation, depending upon previous insults, resistance to injury, reparative processes, and the availability of hormonal and nutrient factors. Even after a cancerous transformation, natural immune and other defense mechanisms can prevent the gross appearance of a tumor.

It has been estimated that the potency of carcinogens in animal experiments can vary by a factor of 10^7 , and human exposure to environmental insults by a factor of 10^9 .⁶ Thus, it is conceivable that the range of potency of a carcinogen could vary by several orders of magnitude and that a given exposure that was carcinogenic in rats could produce either 500,000 cancers or none in the U.S. adult human population over a quarter century. The necessity for a more complete understanding of the phenomenon and more reliable knowledge concerning these events needs hardly to be repeated.

Testing in Animals

Data on carcinogenesis in humans who have been exposed to certain noxious agents have the greatest applicability for regulation, when such examples can be found in human subpopulations. A list of 26 chemical substances has been proposed as representing established carcinogens in man, by David P. Rall, Director, National Institute for Environmental Health Sciences.⁷ There are approximately 56 more substances for which there is less definitive evidence.^{1,7} All of these substances have been identified through epidemiological or clinical experience, yet they do account for no more than 5% of all cancers,⁸ far from the high figure that some persons have suggested as being due to environmental exposure.

The regulatory process attempts to prospectively identify new substances in the environment that may expose some people to an unacceptable chance for developing cancer. Obviously, it is unethical to conduct prospective studies in man, so animal experimentation has been accepted as the best alterna-

tive, with the qualified assumption that the animal data might predict human experience.

The use of animals in testing carcinogens had its origin in basic research where the principal concern was to study the mechanism of carcinogenesis rather than to assess real-life risk. For that purpose, animal models were developed so as to maximize the possibility of developing cancer and shorten the time required for its appearance. Hence, the practice has used maximum tolerated doses in those species and strains of animals having maximum susceptibility. Further test refinements have included the use of both sexes and continued exposures for the lifetimes of more than one generation of animals.

Guidelines generally prescribe the feeding of a test substance even though inhalation or skin absorption may be the usual mode of entry. Further bias is introduced by prescribing "nearly toxic" or "maximally tolerated" doses of the test substance, i.e., doses that potentially overload those metabolic pathways which might influence the development of a tumor. Such problems are generally conceded in the scientific presentation of data, but they are often ignored when recommendations are made for the test procedure and in the later determination of what constitutes a permissible dose for humans.

The Council's consultants agree that to identify carcinogenicity in animal tests does not per se predict either risk or outcome in a human experience. Moreover, an agent can metabolize differently in diverse species and even strains of mice. Thus, a substance can be carcinogenic for certain organs in one species but relatively harmless in other organs or in other species.⁶

From 100 to 300 new compounds are subjected to animal assays each year at a cost of at least \$250,000 per test. Of the above-mentioned chemical substances, for which there is suspicion of human carcinogenic potential, all but arsenic have been shown to be carcinogenic in animal assay. However, there is much less agreement that other substances found to be carcinogenic by animal assay are necessarily so in the human. Because of the great expense of such animal testing and the prospective testing of 1,000 new compounds each year, there is much interest in the short-term mutagenesis tests that may be predictive of carcinogenicity.

Mutagenesis

Several short-term screening tests can be used to measure DNA transformation or cellular mutation as a consequence of chemical exposure. These include the use of a defective mutant of *Salmonella typhimurium* (Ames test), the intact *Drosophila*, or cultured mammalian cells. In each system a change in cellular DNA, chromatid exchange, DNA correction or DNA damage is sought. While correlation of these tests with animal carcinogenesis is quite high, it is not perfect. Of 274 chemicals that have been tested in

both rodents and the Ames test, 210 (76%) showed a concordance. The agreement was good in the highly electrophilic molecules, but low for antimetabolites, polychlorinated cyclic compounds, and steroids. The Ames test has shown positive for 16 to 18 known human carcinogens (benzene and diethylstilbestrol were exceptions). The sensitivity and specificity of the Ames test as well as other mutagenicity tests are still poorly defined. It would be undesirable to use mutagenicity results alone as a basis for carcinogen regulation even though they may have some value in screening. A compound screened by a battery of such tests could then be subjected to an animal test, if one or more of the screens showed mutagenesis.

Risk Assessment

In tests of carcinogenic potency, known carcinogens may vary over 10^7 in the daily dose required to produce cancers in half of the exposed animals. In order to make estimates of risk that have any meaning, there needs to be further examination of the relationship between levels of human exposure that are perceptibly carcinogenic and some measure of the potency of the same compound in bioassay.

The Delaney Clause of the Federal Food, Drug, and Cosmetic Act, requires that once carcinogenicity is established for a food additive (in man or animal), the additive should not be used in foods.

Consequently there has been little effort, until recently, to quantitate the level of exposure that would be required to cause cancer. There is some evidence both from experimental animals and man that there is a threshold for many carcinogens; thus, the concept of a threshold level beneath which exposure is harmless cannot be rejected. (Indeed, the Supreme Court has decided that government policy decisions may not be based upon the no-threshold assumption.) This conclusion is all the more important as we discover with increasingly sensitive detection capability that many suspected carcinogens exist in the environment at very low levels and will be difficult to remove entirely from water or air.

Although biometric models using animal test data have been used for estimating tolerable limits of exposure (TLV), the suggestion of quantitative predictions for the human population in the absence of adequate epidemiologic data may be quite misleading.

Scientific Presentation

The White House Office of Science and Technology Policy (OSTP) recommended in 1979 that the authority for the assessment of cancer risk be centralized under the National Toxicology Program (NTP), which is constituted by representatives from FDA, NIH, NCI, NIEHS, NIOSH, EPA, CPSC, OSHA, and the CDC.⁹ Public concern for human safety is often superimposed upon the inherent biases that favor development of cancer in the animal bioassays; therefore, the OSTP has suggested that the

decision-making should be divided into two stages: stage I is to be a scientific estimate of the highest tolerated (safe) level and the limits for the estimate given, while stage II—in a sociopolitical decision—would set the margin of safety and incorporate considerations of cost, benefit, social impact, and feasibility of control.

The National Academy of Sciences Committee on Saccharin and Food Safety Policy has suggested the establishment of a hierarchy of risk categories. The Interagency Regulatory Liaison Group's (IRLG) Work Group on Risk Assessment presented its own analysis of the decision-making process and guidelines for cancer risk assessment, but recommended no separation of the scientific assessment from the regulatory decision. On the other hand, the American Industrial Health Council (AIHC) has proposed the creation of an independent science panel, separate from the regulatory agencies, which would assure objective review of available data and of stage I decisions apart from social or political influence. This objective scientific assessment would be made available to the five concerned agencies of the IRLG (FDA, CPSC, EPA, OSHA, and USDA) for application in the stage II regulatory decision-making. A careful division is made between the considerations in stage I and decisions in stage II and specific plans are given for the composition and the operation of the science panel, which would have a congressional mandate. Such a scientific panel would serve to coordinate federal policies in the several agencies, tying regulatory decisions to a credible and uniform science base.

The proposal of the AIHC, which agrees in some measure with the earlier suggestion of OSTP, may be met by the activities of the NTP, particularly if the NTP's work and conclusions are subjected to adequate peer review. This program, initiated in 1979, draws upon the relevant activities of the several institutes of the NIH, the NCI, the FDA, the CDC/NIOSH, and the NIEHS.⁹ One of the NTP's major objectives is the "creation of stronger links between the basic toxicological research devoted to the development and validation of new and improved toxicological methods and the needs of the regulatory community for such methods." It is not yet clear just how successfully this group will serve as an independent scientific body within government and how objectively it will analyze data and provide scientific judgments on toxicological issues. It is commonplace, however, for the several federal agencies to resort to NAS-IOM committees when difficult issues arise, so perhaps the goals of the AIHC proposal are achievable within the present system and without further congressional action.

AMA Position

The AMA has responded to several proposals of a similar nature in the *Federal Register* and has re-

peatedly suggested that (1) the scientific and regulatory decisions should be made by separate bodies; (2) a uniform policy with uniform decision-making criteria should be applied by the several relevant federal agencies; (3) a scientific panel of experts, independent of the regulatory agencies, should be convened to review and comment on the scientific decisions; and (4) the scientific decisions should be exposed to broad peer review within the scientific community—preferably through publication in peer-reviewed journals. (For this last point to be meaningful, sufficient time must be allowed for comment. This was stressed in an Executive Order of the President in 1978.¹⁰ The price that is paid for fast action by a regulatory agency on the basis of data reviewed by a limited number of scientists may be a bad regulatory decision and one that later requires agonizing revision or withdrawal).

In 1979, the Council on Scientific Affairs of the AMA addressed the question of "Food Safety and the Food, Drug and Cosmetic Act (Delaney Clause)." It concluded that the current Act "limits the availability of regulatory agencies to exercise judgment and thereby make comparative risk or risk/benefit assessments for food additives as part of the decision-making process." It recommended amendment of the Act "to allow for consideration of the concept of alternative risks before requiring the banning of substances suspected of being carcinogenic." It finally recommended that "eligibility of a substance for consideration by the regulatory agency as an acceptable food substance should be based upon the best scientific data available on the usefulness, function, uniqueness, health need for, and potential risk of the substance."

Observations and Recommendations

The Council is concerned about the hundreds of millions of dollars that are spent each year (both in the public and private sectors) for the carcinogenicity testing of chemical substances. The concern is particularly grave in view of the questionable scientific value of the tests when used to predict human experience.

The Council is also concerned that the quality of the laboratory work being done, both in-house and by contract, be of the highest caliber.

The Council on Scientific Affairs, therefore, makes

the following observations and recommendations:

1. Even though such carcinogens as asbestos and chromates have been identified in the workplace, there is no definitive epidemiologic evidence that the United States has experienced an overall increase in the incidence of cancer related to high levels of pollutants or contaminants in the environment.

2. Much more research relating mutagenesis to carcinogenesis in animal bioassay, and in turn to human carcinogenesis, must be done before mutagenesis tests or bioassays for carcinogens can be used directly for regulating substances in the human environment.

3. The AMA should continue to encourage federal regulatory agencies to make frequent use of an independent extramural review process for full scientific assessment, one that will objectively consider experimental biases and define the limits of accuracy of the assay system prior to a formal proposal to regulate a potential carcinogen.

4. The AMA should advise federal regulatory agencies of the importance of providing a comment period of at least 90 days following the proposal of a regulation, so that there may be an extensive, in-depth peer review of the proposed policy or rule. Publication of the scientific data in peer-reviewed journals would allow full consideration of the issue by the scientific community at large.

REFERENCES

1. Doll R: Introduction, in Hiatt HH, Watson JD, Weinstein JA (eds): *Origins of Human Cancer, Cold Spring Harbor Conference on Cell Proliferation*, vol 4. Cold Spring Harbor, NY, 1977.
2. Weisburger JH, Cohen LA, Wynder EL: The etiology and metabolic epidemiology of the main human cancers, in *ibid*.
3. *The Surgeon General's Report on Health Promotion and Disease Prevention*. DHEW (PHS) Publication #79-55071. US Government Printing Office, Washington, DC 20402.
4. Davis DL, Magee BH: Cancer and industrial pollution, letters. *Science* 206:1356, 1979.
5. Berenblum I: Historical perspective, in Slaga TJ, Spivak A, Boutwell RK (eds): *Carcinogenesis—A Comprehensive Survey*, vol 2. NY, Raven Press, 1978.
6. Gori GB: The regulation of carcinogenic hazards. *Science* 208:256, 1980.
7. Maugh TH II: Chemical carcinogens: The scientific basis for regulation. *Science* 201:1200, 1978.
8. Higginson J: Proportion of cancers due to occupation. *Prev Med* 9:180-188, 1980.
9. *National Toxicology Program: Annual Plan Fiscal Year 1979*. DHEW, PHS Publication.
10. Executive Order 12044, *U. S. Code Congressional and Administrative News*, 95th Congress, 2nd Session (1978), vol 7, p 9680.

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Spinal Cord Compression:

Comparison of Extradural and Intramedullary Metastases

WILLIAM GROSH, M.D. and F. ANTHONY GRECO, M.D., Editor

Spinal cord compression is a medical emergency; except for trauma, neoplastic disease is its most common cause. Though the usual cause of the compression is extradural metastasis, intradural extramedullary and intramedullary metastases also occur.

We present here two patients with neoplastic intramedullary spinal cord compression. The discussion will focus on the pathophysiology, diagnosis and treatment of malignant extradural and intramedullary compressive syndromes.

Case 1. This 59-year-old male smoker was admitted to the hospital on June 2, 1979 for evaluation of headache, dementia and right cerebellar ataxia. A head CT scan showed a large third ventricle with a right to left shift. Chest x-ray showed a right hilar mass, but bronchoscopy was negative except for bleeding from the right upper lobe. Increased lethargy ten days after a ventricular-atrial shunt led to craniotomy, where a large midline cerebellar mass of adenocarcinoma was excised. He received 3,000 rads to his brain and 3,000 rads to his right hilum, and on Oct. 5, 1979, repeat CT scan showed no tumor. On Nov. 23, 1979, however, bone scan demonstrated a sternal hot spot and sputum was positive for carcinoma. Neuromuscular examination was normal. He was treated with chemotherapy (cyclophosphamide, adriamycin, and methotrexate) and radiotherapy to the sternum.

On June 12, 1980, he developed sudden weakness in his right arm followed by weakness in the right leg. He persistently held his head tilted downward and to the left, as severe pain radiated down his right arm with head rotation. Examination revealed right-sided weakness and decreased pain and vibration sense below the right knee and in the right arm distal to the clavicle; position sense was reduced in the right hand and foot and deep tendon reflexes were hyperactive on the right, with a right Hoffmann and Babinski. Cervical spine and skull films were negative. Head CT scan, unchanged from November 1979, demonstrated an enhancing right cerebellar lesion. He developed urinary retention and

left-sided weakness, and myelography revealed a left T₂-T₃ extradural defect, not occluding the canal. On AP films an intramedullary mass was seen extending from C₂ through C₅. Despite treatment with decadron 4 mg every six hours and 2,500 rads to C₂ through T₃, he remained densely hemiplegic on the right, without any motor or sensory capacity in the left leg and minimal motor function in the left arm, and died shortly thereafter. Permission for autopsy was refused.

Case 2. This 54-year-old male smoker was admitted to the hospital on Aug. 10, 1980 for evaluation of a large lung mass. Bronchoscopy revealed a fungating lesion obstructing the right upper lobe, and biopsies showed small cell carcinoma. Liver-spleen scan, bone scan, and bone marrow examination were normal.

His lung lesion resolved following six courses of chemotherapy with cyclophosphamide, adriamycin and vincristine. He noted slight weakness and incoordination in his legs, which was ascribed to vincristine neurotoxicity. By March 12, 1981, he complained of progressive weakness in his right leg though he denied any progressive numbness.

Physical examination revealed weakness in the right leg, with decreased sensation to pinprick in his left toes, and distally from the right knee; Babinskis were normal and cranial nerves were intact. Chest x-ray revealed no evidence of tumor. Metrizamide myelogram was normal. CSF contained glucose 67 mg/dl, total protein 79 mg/dl, RBC 9/cu mm, WBC 3/cu mm (100% monocytes); cytology was negative.

Readmission was required on April 22, 1981 because of further weakness, difficulty walking, and urinary retention. Physical examination demonstrated mild lumbosacral spine tenderness, with normal upper extremity strength but lower extremity weakness, greater on the right than the left. There was a 1500 cc residual urinary volume.

Myelography demonstrated a partial block at T₁₁-T₁₂, with poorly defined upper margins but a cap-like inferior margin consistent with an intradural defect. CSF cytology and head CT scan were normal. Laminectomy on April 27 showed the dura and arachnoid to be uninvolved, but the cord was tense, hard and very swollen at the conus at T₁₂. A 10 mm incision in the cord allowed some herniation of the tumor, which had invaded 3 to 4 cm into the cord. The tumor was evacuated, and pathology revealed small cell carcinoma. He was given 3,000 rads in 10 fractions to T₁₂ area, and by May 6, 1981 he was walking with a walker; by Aug. 24 he was ambulatory using a cane.

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Incidence of Central Nervous System Metastases

Central nervous system (CNS) metastases are common in cancer patients. Intracranial metastases were present in about 18% of autopsied patients with cancer at Memorial Sloan Kettering Cancer Center,¹ about 66% of them intracerebral metastases and 22% leptomeningeal. Although intracranial extradural metastases are rare,² in the spinal cord extradural, and not intradural, metastases are most common. Depending upon the series, the frequency of extramedullary metastases varies from 1% to 5%.³⁻⁵

Intramedullary metastases account for only 0.8% to 3.8% of metastatic spinal cord lesions.⁵⁻⁸ In 1972, Edelson et al⁶ reviewed 70 cases reported in the literature, to which they added nine. Perhaps as patients with some cancers survive longer, these intramedullary lesions will become a more frequent clinical problem, since the spinal cord, like the brain, probably represents a pharmacologic sanctuary which most effective chemotherapeutic drugs do not penetrate in adequate concentrations.

Primary Tumor Sites

Table 1 compares the diverse sites of origin of CNS metastases according to several reviews.^{2,6,9,10} Primary pulmonary malignancies are common origins for intramedullary metastases (47%), though less so for extradural compressive defects (10% to 18%).^{6,10} Melanoma is an unusual

cause of extradural spinal cord compression (1%) but accounted for six of 79 intramedullary metastases.^{2,6,10} Arterial seeding has been considered a likely pathogenesis of intramedullary metastasis as 80% of these patients have either a primary or metastatic pulmonary malignancy.⁶

Clinical Presentation

Regardless of the location of the lesion or the histology, cord compressions present similarly. A prodrome consisting of pain is present in 90% or more of patients with extradural (ED) compression.¹¹ Edelson et al⁶ noted that 70% (26/37) of patients with intramedullary (IM) lesions complained of pain; in 50% (19) of those it was their initial complaint. This pain is usually in the midline and frequently has a radicular component. In some cases, radicular pain alone may be present and may be misinterpreted as visceral pain, especially in the thoracic or lumbosacral areas.

Vertebral percussion, straight leg raising, or neck flexion may elicit pain at the site of ED or IM compression, and it may be intensified by maneuvers that increase spinal fluid pressure (Valsalva, cough, tenesmus).

At a site of malignant ED compression, nearly 85% of patients have radiographic evidence of bone metastases, though only 11 of 37 cases of IM compression had either radiographic or autopsy evidence of vertebral involvement.¹²

The duration of pain before the onset of clinically evident neurological deficits is variable.

TABLE 1
PERCENT OF PRIMARY TUMORS SEEN AS METASTASES AT
SPECIFIC ANATOMICAL SITES

Primary Tumor Site	Brain Parenchyma	Extradural		Intramedullary	
	3,560 patients ⁹ (%)	105 patients ² (%)	78 patients ¹⁰ (%)	100 patients ⁶ (%)	79 patients ⁶ (%)
Lung	34-40	9.5	17.9	10	47
Breast	14-22	20	19.2	23	11
Hypernephroma	6-8	—	6.4	6	5
Melanoma	4.5-5.5	—	—	1	7.5
Hodgkin's disease and lymphoma	—	12.3	14.1	16	7.5
Sarcoma	—	11.4	7.7	—	—
Prostatic	—	6.6	9.0	—	—
Colon/Rectal	—	—	7.7	4	6.3

Indeed, pain may not occur at all or may be followed immediately or after several months by the compressive phase. Tarlov¹³ demonstrated that in dogs experimentally induced spinal cord compression first caused loss of motor function, followed by loss of sensation. When the compression was relieved, these functions returned in reverse order. Clinically, sensory deficits are nearly always present before motor loss is completed. ED compression may present as unilateral weakness, a sense of imbalance, or gait ataxia with pain and motor or sensory loss. Usually, in ED compression, the spinal cord signs are relatively symmetrical.^{2,14}

A review of 16 patients^{6,15-19} with IM cord compression revealed asymmetric neurologic findings in 12 patients, four of whom had coexistent brain lesions causing much of the asymmetry. Five of the 12 had no evaluation for coexistent brain lesions. In none of the 16 patients were findings strictly unilateral.

In Edelson's series⁶ of IM lesions all patients had weakness, 60% had spasticity, and 50% had sensory loss, but only six of 37 demonstrated dissociated sensory loss, a classic characteristic of IM lesions. Gilbert et al¹⁴ described nearly identical statistics in ED compression, with 87% of 130 patients manifesting weakness, 15% paraplegia, and 50% sensory loss at the time of diagnosis. Autonomic dysfunction occurs early in IM and late in ED compressive lesions,²⁰ but is seen in 60% of each group; it is an unfavorable sign often associated with a poor response to treatment.

Gilbert et al,¹⁴ comparing 105 patients gathered from 1964-1970 to 130 patients from 1974-1976 with ED compression, demonstrated earlier diagnosis in the later series. In the old series only 17% were ambulatory and 64% paraparetic when diagnosed, while in the new series 49% were ambulatory and 37% paraparetic. Patients who were ambulatory at the onset of treatment had the best prognosis.

Cerebrospinal Fluid Findings

CSF protein levels in IM metastases were above 50 mg/dl in 19 of 23 reported cases, and above 100 mg/dl in 12 of those 19. In ED compression, protein concentrations are almost invariably elevated and the fluid frequently xanthochromic when complete myelographic block is present. Barron et al⁵ reported elevated CSF protein ranging from 48 to 822 mg/dl in all of 31 patients with complete manometric block

due to ED metastases. Spinal fluid glucose was normal and pleocytosis absent except in one patient with coexistent carcinomatous meningitis.

Myelography

Myelography is essential for confirming the clinical suspicion of spinal cord compression and delineating its extent. Although the use of iodinated dye may very rarely produce clinically evident sterile meningitis and, as a long-term complication,²¹ adhesive arachnoiditis, Hildebrand⁴ has not observed these complications in more than 250 cancer patients who have undergone myelography. In patients with complete block, cisternal myelography is suggested in addition to the lumbar route to assess the cephalad and caudad extent of the lesion.⁵ When ED compression is present, virtually all myelographic studies are diagnostic, but this is not true with IM cord lesions.⁶ Myelograms reported in 30 patients were positive in only ten (33%), and in three (23%) were atypical.⁶ The impact of CT scan radiologic studies and metrizamide on the diagnosis of cord lesions remains to be seen. New high resolution scanners will likely add significantly to diagnostic capabilities.

Differential Diagnosis

Alternative diagnostic possibilities are broad, and include primary spinal tumors such as gliomas, meningiomas, neurinomas, intraspinal angiomas; epidural hemorrhage or epidural abscess; hematomyelia; malignant meningitides; intervertebral disc prolapse; postradiation myelopathy; arachnoiditis; brain metastasis; spinal cord infarction as seen in adhesive arachnoiditis, spinal cord trauma, cardiovascular diseases; syphilis; multiple sclerosis; amyotrophic lateral sclerosis; and combined systems cord degeneration.

By combined use of history, physical, myelography, and CSF examination, diagnosis can generally be secure, though laminectomy may be necessary to confirm it, especially when a previous history of malignancy is absent or of questionable relevance.

Treatment

Intact neurologic function and pain relief are the goals of treatment in spinal cord compression. Since function, once lost, is often not regained, early treatment is essential. This requires an understanding of the clinical progression during spinal cord compression.

The successful treatment of cord compression can preserve an ambulatory state, maintain adequate sphincter function, and control pain. This traditionally required laminectomy, but now includes radiation, and with many neoplasms, chemotherapy.

Early diagnosis is critical, as 75% of patients who are ambulatory when treatment is given remain ambulatory, whereas less than 5% of patients initially paraplegic recovered sufficiently to walk, regardless of therapy.¹⁴ Therefore, early use of myelography is mandatory, and one should expect to occasionally have a normal study (no spinal cord compression) in order to diagnose this frequent problem as early as possible. Often only severe back pain with some evidence of vertebral metastases is an indication for myelography.^{11,22}

Laminectomy has appreciable mortality (3% to 9%) and morbidity.²³⁻²⁵ Gilbert et al¹⁴ compared radiotherapy alone with combined surgery and radiotherapy and found no differences in successful outcome overall, although there was some selection bias relegating poor prognosis patients to combined therapy.¹⁴ They suggest reserving laminectomy for patients with unknown primary tumors or questionable diagnoses, relapses occurring after radiotherapy, or inexorable symptoms progression during radiotherapy. Those patients with "less radiosensitive tumors" had a poorer outcome than the more radiosensitive group.

In this study, subgroups of patients with "less radiosensitive" tumors and rapidly progressive compression were examined retrospectively. In the less radiosensitive group, laminectomy appeared to confer no benefit over radiotherapy alone. The small group of patients with rapidly progressive compression seemed more effectively treated with radiotherapy alone. These findings contradict conventional therapy, but are based on retrospective analyses of small numbers of patients in a disease process marked by heterogeneity. In the absence of large controlled prospective studies, the treatment of choice remains unknown.

In both varieties of cord compression, steroids are utilized in an effort to reduce edema, although there are no randomized prospective studies to support this contention and there are conflicting laboratory data on the presence or absence of edema in cord compression and the efficacy of steroids in its reversal.

Clearly, in view of the rarity of IM metastasis,

no studies delineate its treatment of choice, either. Most patients in the literature who were treated received radiotherapy, though many were diagnosed only at necropsy. Surgical approaches in these patients, who often have widespread disease, involve myelotomy and the risk of worsened neurological function. Edelson et al⁶ reported a case of metastatic pulmonary adenocarcinoma that underwent surgical exploration for a presumed intradural defect with progressive neurological findings after radiotherapy. At laminectomy only the extramedullary position of an intramedullary metastasis was removed, with some improvement in lower extremity strength. Two other patients with lymphomas improved with radiotherapy alone. Our second patient, who had small cell carcinoma, underwent myelotomy successfully and has had a good outcome from combined surgery and radiotherapy.

Conclusion

Spinal cord compression in cancer patients is a common complication which requires early diagnosis and prompt treatment if intact neurological function is to be maintained. The less neurological dysfunction a patient has at diagnosis, the better his prognosis. Early diagnosis requires a high degree of clinical suspicion and early myelography, which is often based only on severe back pain with evidence of vertebral metastasis.

The clinical presentations of ED and IM metastases are very similar, but myelography is less often conclusively positive in IM metastasis.

Radiation therapy appears appropriate for many patients with neoplastic cord compression, but intense controversy still surrounds the approach to those patients with rapidly progressive cord compression and "less radiosensitive" tumors.

Laminectomy should be considered for patients with unknown primary tumors, or questionable diagnosis, inexorable progression during radiotherapy, and relapses following radiotherapy. Better definition of therapy will await large, controlled, prospective randomized studies.

REFERENCES

1. Posner JB: Management of central nervous system metastasis. *Semin Oncol* 41:81-93, 1977.
2. Posner JB: Neurological complications of systemic cancer. *Med Clin North Am* 55:625-636, 1971.
3. Bansal S, Brady LW, Olsen AO, et al: The treatment of metastatic

(Continued on page 826)

Care of Insensitive Feet

Ruth Miller, M.D. (endocrinology fellow, St. Thomas Hospital): The patient is a 46-year-old woman who was found to have diabetes during a recent acute respiratory illness, when plasma glucose levels of up to 375 mg/dl were found. She had never known of diabetes in the past, but had gained about 100 lb over the preceding year. After resolution of the acute respiratory illness, her plasma glucose returned to the normal range with a 1,000 calorie diet, without the need for oral hypoglycemic drugs or insulin. We noted an asymptomatic but potentially serious condition in the form of extensive thickening and hyperkeratosis of the soles of the feet, with scaling, cracking, and fissuring of the thickened skin. We were concerned about the possibility of infection developing in the deep fissures.

James P. Fields, M.D. (chief of dermatology, Vanderbilt University): Callouses on the plantar surface of the foot are due to repetitive mild trauma, such as rubbing on a shoe, and indicate poorly fitting shoes. In an insensitive foot, the areas most likely to break down and develop ulceration and infection are indicated in Figure 1. Most underlie the metatarsal heads, where weight is borne at the conclusion of each step. Twenty-five percent of the ulcers occur under the second and third metatarsal heads, and another 15% under the first and fifth metatarsal heads. Other frequent areas of ulceration are the great toe, the lateral surface of the foot at the base of the metatarsals, and the heel. The diabetic foot should be examined at every visit and prophylactic measures taken before ulcerations occur, particularly if there is loss of sensation due to diabetic neuropathy.

There are three major prophylactic principles. First, weight-bearing pressure should be distributed inside the shoe. The addition of a soft insole, such as the Spenco insole, made of micro-cellular rubber material covered with nylon, is a

The Diabetes Clinical Care Conference at St. Thomas Hospital, Nashville, Tenn., a collaborative educational program of the St. Thomas Department of Hospital Education and the Vanderbilt Diabetes Research and Training Center, is edited by Alan L. Graber, M.D.

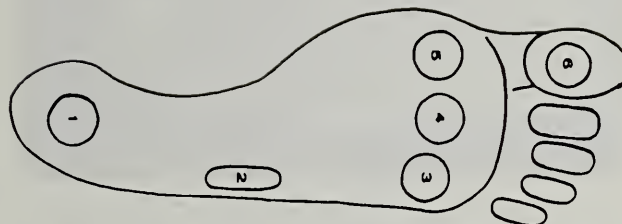


Figure 1. Six areas on plantar surface of foot at high risk of development of ulceration.

simple measure that provides protection for the foot that has no deformity or high pressure points. Sometimes these can be used inside conventional oxford shoes, but an open sandal is softer and preferable. A molded inlay of polyethylene, such as Plastazote or Aliplast, has the advantage of distributing weight-bearing pressures over the entire plantar surface, but it is 6 to 12 mm high, necessitating an extra-depth shoe to accommodate it. Since the extra-depth shoe is a quarter inch deeper all over, the inlay can be custom molded and altered to accommodate a number of foot deformities or soft tissue injuries. The molded insole affords relief for tissues under bony prominences, as well as cushioning and an increased weight-bearing surface. Next, the foot should be splinted by a rigid outer sole, such as a steel bar down the sole of the shoe. Reduction of stress on the plantar surface of the foot and avoidance of toe strike is accomplished most effectively with a custom-made shoe having a rigid rocker or roller bottom under the sole near the center of the foot. Finally, a metatarsal bar placed with the thickest part of the bar proximal to the metatarsal heads can minimize weight-bearing stress on the metatarsal heads by redistributing the stress along the shafts of the metatarsal bones.

If an acute ulcer develops, the pressure of weight-bearing must be eliminated. This requires either bedrest or the use of crutches. In a more chronic ulcer, pressure can be relieved by a walking cast or a prescription sandal.

Ulcers on the plantar surface usually result from lack of sensation, since the individual



Figure 2. An example of ulceration on the plantar surface of the foot underlying the second and third metatarsal heads.

would shift the weight or move if he felt discomfort. It is known that an area of skin can break down with pressure sufficient to occlude the capillary blood supply for two hours. This is a good practical point to remember. Tell your patients to break in new stiff shoes which might cause pressure by wearing them no longer than two hours at a time.

Keratolytic agents can be used to remove excessive callous formation. This includes soaking

in 20% urea solution for 15 minutes three to four times daily or application of 30% urea cream with a Saran Wrap occlusive dressing. When fissures develop, painting the cracks with crude cold tar is helpful.

Alan L. Graber, M.D. (endocrinologist, St. Thomas Hospital): The sequence of heavy callosus formation leading to cracking of the skin, infection, ulceration, and eventually amputation is all too frequent. Some patients who lose sensation to the skin also lose sudomotor function in the same area, resulting in the skin becoming especially dry and scaly. The treatment for anhidrosis is daily soaking of the feet in tepid water (not hot), afterwards covering the area with vaseline or lanolin to help retain the water in the skin and increase skin pliability. An example of a plantar ulcer which developed in a high-risk area under the second and third metatarsal heads is shown in Figure 2.

Acknowledgment:

Figure 2 is reproduced with permission from *Physical Therapy* (59:16, 1979).

SUGGESTED READING

1. Shipley DE: Clinical evaluation and care of the insensitive foot. *Phys Ther* 59:13-18, 1979.
2. Hampton GH: Therapeutic footwear for the insensitive foot. *Phys Ther* 59:23-29, 1979.

Oncology Grand Rounds...

(Continued from page 824)

spinal cord tumors. *JAMA* 2020:686-688, 1967.

4. Hildebrand J: *Lesions of the Nervous System in Cancer Patients*: EORTC Monograph. New York, Raven Press, 1972, chap 2, p 19.

5. Barron KD, Mirano A, Araki S, et al: Experiences with metastatic neoplasms involving the spinal cord. *Neurology* 9:91-106, 1959.

6. Edelson RN, Deck MDF, Posner JB: Intramedullary spinal cord metastases: Clinical and radiological findings in nine cases. *Neurology* 22:1222-1231, 1972.

7. Strang RR: Metastatic tumor of the cervical spinal cord. *Med J Aust* 49:205-206, 1962.

8. Wilson G, Rupp C: Spinal cord lesions associated with metastatic tumors. *Trans Am Neurol Assoc* 72:125, 1947.

9. Penzholz H: Die Metastatischen Er Krankugen des Zentralnervensystems bei bosartigen Tumoren. Eine Klinische Studie An Hand 158 eigener Falle einer neurochirurgischen Klinik. *Acta Neurochir* 16 (suppl):1, 1968.

10. Vieth RG, Odom GL: Intracranial metastases and their neurosurgical treatment. *J Neurosurg* 23:501, 1965.

11. Mullins GM, Flynn MB, El-Mahdl AM, et al: Malignant lymphoma in the spinal epidural space. *Ann Intern Med* 74:416-423, 1971.

12. Djindjian R: *Angiography of the Spinal Cord*. Baltimore, University Park Press, 1970, pp 370-372.

13. Tarlov IM: Spinal cord compressive studies II: Time limits for recovery after acute compression in dogs. *Arch Neurol Psychiatry* 71:271-290, 1954.

14. Gilbert RW, Kim SH, Posner JB: Epidural spinal cord compression

from metastatic tumor: Diagnosis and treatment. *Ann Neurol* 3:40-51, 1978.

15. Hirose G, Shimazaki K, Takado M, et al: Intramedullary spinal cord metastases. *J Neurosurg* 52:718-721, 1980.

16. Rasch GC, Rosenbaum D, Heimberger RF: Intramedullary spinal cord metastases from lung carcinoma simulating primary cervical cord tumor. *Neurology* 3:311, 1953.

17. Walker LG: Intramedullary spinal cord metastasis from carcinoma of the colon. *Am Surg* 133:422, 1967.

18. Benson DF: Intramedullary spinal cord metastasis. *Neurology* 10:28, 1960.

19. Clay CB, Weiland AH: Intramedullary spinal cord metastasis from melanoma. *Am Surg* 17:1009, 1951.

20. Haymaker W: *Bings Local Diagnosis in Neurological Diseases*, ed 15. St. Louis, CV Mosby Co, 1969, p 92.

21. Bering EA Jr: Notes on the retention of pantopaque in the subarachnoid space. *Am J Surg* 80:455-458, 1950.

22. Longeval E, Hildebrand J, Vollout GH: Early diagnosis of metastases in the epidural space. *Acta Neurochir* 31:177-184, 1975.

23. White WA, Patterson RH, Bergland RM: Role of surgery in the treatment of spinal cord compression by metastatic neoplasm. *Cancer* 27:558-561, 1971.

24. Arseni CN, Simionescu MC, Horwath L: Tumors of the spine. *Acta Psychiatr Neurol Scand* 34:398-410, 1959.

25. Mullan J, Evans JP: Neoplastic disease of the spinal epidural space. *Arch Surg* 74:900-907, 1957.

Radiology Case of the Month

TIMOTHY McGHEE, M.D. and RANDALL L. SCOTT, M.D.

A 45-year-old white male nonsmoker presented with a history of cough. Physical examination was negative. Laboratory examination revealed a positive VDRL. A PA chest film (Fig. 1) and contrast-enhanced CT scan of the chest (Fig. 2) are submitted for interpretation. What is your diagnosis?

- (1) Bronchogenic cyst
- (2) Lymphoma
- (3) Aortic aneurysm
- (4) Bronchogenic carcinoma



Figure 1. PA chest radiograph.

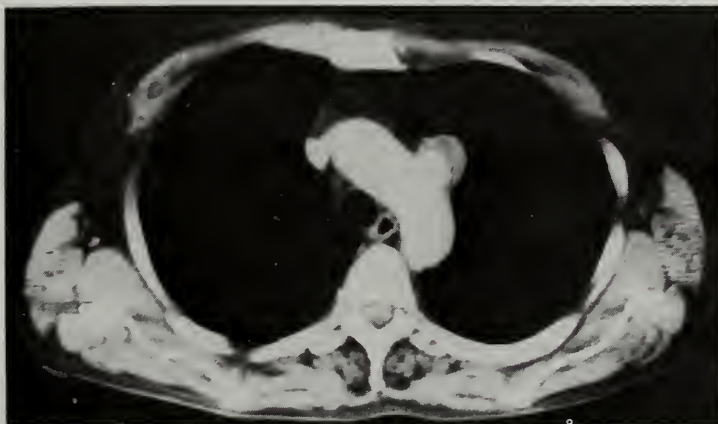


Figure 2. Contrast-enhanced CT scan of the chest obtained at the level of the thoracic aorta.

From the Department of Radiology, University of Tennessee Center for the Health Sciences, 865 Jefferson Ave., Memphis, TN 38163.

Radiographic Findings

The PA chest film (Fig. 1) shows a well-demarcated, smooth soft tissue mass projecting to the left of the aortic knob. The mass has a sharp lateral border, but the medial border merges with the mediastinum. There is no calcification within the mass, nor is there evidence of pleural fluid or hilar adenopathy.

The contrast-enhanced CT scan of the chest (Fig. 2) shows a mass contiguous with the aortic arch and projecting anteriorly. There is simultaneous appearance of contrast material within the aortic lumen and the portion of the mass adjacent to the aorta. A crescentic region of nonenhancement is seen peripherally within the mass.

Though lymphoma can present with mediastinal adenopathy, it tends to be bilateral but asymmetrical. In this case adenopathy was not present on physical examination, nor is there any CT evidence of other mediastinal masses, making lymphoma less likely.

Bronchogenic cysts are congenital malformations of the lung containing mucus and debris and lined by respiratory epithelium. They occur most commonly in the lung parenchyma and appear as soft tissue masses. Mediastinal bronchogenic cysts occur most often in the subcarinal region or posterior mediastinum.¹ Relatively homogeneous enhancement of a bronchogenic cyst would not be expected.

Bronchogenic carcinoma can extend into the mediastinum and involve the aorta, but irregularity of the margins of the mass and distortion of mediastinal anatomy might be expected. Although it might enhance with CT scan, a less homogeneous contrast pattern would be likely due to interspersed areas of vascularity and necrosis. In addition, this patient had no history of smoking or weight loss.

The combination of a middle mediastinal mass contiguous with the aorta and enhancing simultaneously makes the diagnosis of aortic aneurysm most likely.² This is a saccular aneurysm of the proximal arch due to syphilis. The crescentic area of nonenhancement is due to thrombus within the aneurysm.

Discussion

Aneurysms of the thoracic aorta can be classified by etiology into atherosclerotic, syphilitic, dissecting, mycotic, and traumatic.

A dissecting aneurysm usually occurs in an aorta weakened by cystic medial necrosis or

atherosclerosis. As many as 70% will have widening of the mediastinum on the chest film. These aneurysms result in general widening of the aortic silhouette, with a true and false lumen demonstrated angiographically. Aortography shows delayed opacification of the false channel as it circumferentially compresses the true lumen.

Mycotic aneurysms account for 2.5% of thoracic aneurysms and are usually in the ascending aorta. Most are associated with generalized sepsis or bacterial endocarditis, leading to seeding of the aortic wall and subsequent destruction. Aortography will demonstrate the aneurysm, which can be either saccular, cylindrical, or fusiform. Such aneurysms have a tendency toward rapid growth and sudden rupture.^{3(p614)}

Traumatic aneurysms generally involve the most proximal portion of the descending aorta at the region of the ligamentum arteriosum. They may calcify and in many cases are associated with a history of blunt chest trauma.^{3(p565)}

In general, atherosclerosis is the most common cause of aortic aneurysm and typically occurs in the sixth and seventh decades. Thoracic aortic involvement with atherosclerosis is generally associated with elongation of the aorta, fusiform dilatation, and calcification when aneurysm is present. Atherosclerotic aneurysms can be saccular, but this is less common.

Syphilitic aneurysms almost always occur in the thoracic aorta and are due to damage of the media with resultant fibrosis and weakening of the wall. They usually occur in the vicinity of the aortic root and adjacent ascending aorta. Routine chest films will often show calcification in the wall of the ascending aorta, but this is seen in atherosclerosis as well.⁴ Syphilitic aneurysms are often saccular and may be symptomatic, producing dysphagia, respiratory difficulty, or cough, as was seen in this case. Since syphilitic aneurysms are a complication of the tertiary phase of the disease, many affected patients will have a positive VDRL.

ANSWER: (3) Aortic aneurysm.



REFERENCES

1. Fraser RG, Pare JA: *Diagnosis of Diseases of the Chest*, vol 2. Philadelphia, WB Saunders Co, 1979, p 612.
2. Harris RD, Usseman JA, Vint VC, et al: Computerized tomographic diagnosis of aneurysms of the thoracic aorta. *Comput Tomogr* 3:81, 1979.
3. Cooley RN, Schreiber MH: *Radiology of the Heart and Great Vessels*. Baltimore, The Williams and Wilkins Company, 1978.
4. Higgins CB, Reinke RT: Non-syphilitic etiology of linear calcification of the ascending aorta. *Radiology* 113:609, 1974.

EKG of the Month

W. BARTON CAMPBELL, M.D.

A 77-year-old woman entered the St. Thomas emergency room complaining of increased dyspnea at rest. The preceding two weeks she had been unable to sleep lying flat and had used three pillows in order to breathe better. She had several episodes of awakening at night with marked shortness of breath which was alleviated by standing up and walking. There was a questionable history of myocardial infarction at age 70. The blood pressure was 92/60 mm Hg. She was sitting upright and the respirations were 34/min. A loud S₃ gallop was present and prominent rales were audible. She had pitting edema to the mid thighs bilaterally. An electrocardiogram was obtained (Fig. 1).



Figure 1

From the Department of Cardiology, St. Thomas Hospital, Box 380, Nashville, TN 37202.

Discussion

This tracing shows sinus rhythm at a rate of 65/min. The P-R interval is normal at 0.17 seconds. The P wave is slightly wide and is notched in V_1 and V_2 . The QRS duration is significantly prolonged at 0.14 seconds. The QRS forces are predominantly leftward, superior and posterior, causing a prominent R in standard lead I and predominant S wave in aVF and V_1 . The combination of QRS widening of 0.12 seconds or more and leftward superior and posterior QRS forces is pathognomonic of left bundle branch block.

Unlike right bundle branch block, blockage of the left bundle branch results in ventricular activation which is initiated on the right side of the septum and proceeds from right to left and from apex to base across the septum. This alteration in the initial forces may often cause inscription of a Q-S in V_1 and the right precordial leads. At times, however, there are significant right ventricular voltage potentials resulting in initial anterior forces with the inscription of a small r wave in lead V_1 followed by a predominant negative deflection. This frequent presence of a right precordial Q-S with left bundle branch block precludes the reading of anterior infarction in this situation. In addition, voltages are often quite prominent and left ventricular enlargement cannot be read in the presence of left bundle branch block. Ventricular repolarization is abnormal, with left bundle branch block due to the altered sequence of ventricular depolarization. It is common to observe ST segment depression and T wave inversion in the left precordial leads and in standard lead I and aVL.

Although left bundle branch block was thought to preclude the electrocardiographic diagnosis of myocardial infarction in most instances,¹ more recent evidence has suggested that at least with inferior infarction, the presence of abnormal Q waves in leads II, III, and aVF correlates strongly with infarction even in the presence of left bundle branch block.² Left bundle

branch block is felt to be most commonly due to a conduction problem of the left bundle itself but it has been shown that simultaneous block of the posterior and anterior intraventricular conduction pathways may result in the same picture. On the other hand, Rosenbaum has stated that even though left bundle branch block precludes the recognition of left anterior hemiblock,³ disappearance of left bundle branch block with left axis deviation may often be followed by residual left axis deviation.

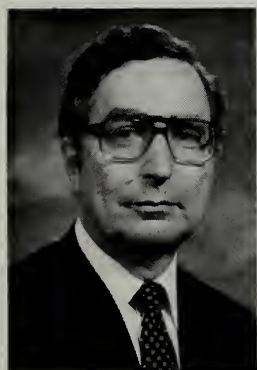
Left bundle branch block is frequently seen in the setting of hypertensive, atherosclerotic, or rheumatic heart disease and is commonly associated with anatomic hypertrophy of the left ventricle, but it can be seen in any clinical situation, and even in occasional otherwise normal patients.

Our patient had a nuclear ventriculogram which disclosed a diffusely enlarged hypocontractile left ventricle. The left ventricular wall thickness was 1.5 cm, measured echocardiographically (upper limits of normal 1.2 cm). The patient's heart rate was inappropriately slow for her physical findings at the time of admission. As her congestive failure was treated she developed sinus bradycardia, with rates as low as 42/min. She was accordingly treated with an AV sequential pacemaker in conjunction with digitalis and diuretics, affording moderate improvement in her symptoms of congestive heart failure.

FINAL DIAGNOSIS: Left bundle branch block.

REFERENCES

1. Scott RC: Current concepts in ventricular activation in the normal heart, in left bundle branch block, and in left bundle branch block with myocardial infarction. *Am Heart J* 64:696, 1962.
2. Horn LG, Flowers NC, Johnson JC: Significance of the diagnostic Q wave of myocardial infarction. *Circulation* 43:420, 1971.
3. Rosenbaum MB, Elizari MV, Lazzari JO: *The Hemiblocks: New concepts of intraventricular conduction based on human anatomical, physiological and clinical studies.* Oldsmar, Fla, Tampa Tracings, 1970.



ALLEN S. EDMONSON

Do You Need Any Help?

If you have any hesitancy in answering in the affirmative, you are certainly a rare physician. Yet when this question comes to us repeatedly from the organizations of our spouses and "help-mates," the auxiliaries of our medical associations, we seem reluctant to accept.

As individuals we have chosen them, or they us, for joint efforts at producing our homes and families. But when they group together as the auxiliaries, all too frequently we in our "corporate identity" as county and state medical associations seem to forget that they are the ones we love and chauvinistically treat them as "just another women's organization."

No doubt the blame can be shared by both the associations and the auxiliaries. The erroneous perception that auxiliaries do only "busy work" or "women's projects" can be put to rest forever if we would take them into the family and challenge them with the difficult and important tasks undertaken by medical associations. No one doubts that our association tasks are difficult and important.

While a professional counselor may be needed to preserve the union, our goal should be to unite the associations and their auxiliaries at least for work projects. Scientific or medical issues will necessarily still be our problems, but social and political issues are and should be joint problems.

Yes, we need some help. We can get it if we are willing.

Allen S. Edmonson M.D.

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NOVEMBER, 1981

editorials

Thoughts for Thanksgiving

A touch of fall in the air this morning reminded me that 1981 is winding down, about to peter out like the wisps of steam rising out of Lake Watauga, gossamer filaments that wove an inconstant veil over the fountains, finally feathering out and dissipating against the ruddy sky of a new day. That brief vision made it easier for me to write a Thanksgiving editorial with two weeks still left in September. Yet, as the song goes, the days do dwindle down to a precious few—September, November, and so on.

Any artist worth his salt has to labor many hours in front of his canvas before his picture is done; it shows only the thing as he sees it. The camera, on the other hand, has made it easy to

render an instant image, and it can depict things as they truly are. But does it?

I was thinking of this the other evening as I gave my not entirely undivided attention to a long, windy, and sometimes diffuse documentary entitled "The Model." Perhaps it was rightfully boring, since most of what both the model and the photographer do is boring, attempting as they do to immortalize on film just the right look, just the proper flair to give you the necessary nudge to buy their sponsor's product. This leads to the proliferation of catalogs which clog the mail this time of year, catalogs replete with plastic smiles on vapid faces flashing jewelry or surmounting togs of all descriptions. That is certainly not reality; it is not even presented as such. I hope with all my heart, for the sanity of all concerned, that it is not even the way things seem to the participants, though I sometimes wonder.

What is presented as reality, though, are vast numbers of photographic essays on the seamy, sordid side of life. Now, it is unquestionably a fact that cities have slums, and that their streets are often clogged with refuse, human and otherwise. Poverty and the dreary life do abound both within and outside the cities of the world, and perhaps we do need from time to time to be reminded of it; certainly we should not ignore it, nor those it afflicts. On the other hand, I doubt it is necessary that we wallow in it. As I look at their work in some of those volumes, I wonder about the authors. Just what are they thinking, and what, if anything, are they trying to say?

Hardship is a part of life; it can either degrade life or give it dignity. The work-worn hands or the care-lined faces of the Appalachian mountain people or the "Okies" in the dust bowl, for example, are badges of honor. The worn shoes of the drunk in the gutter or the sagging stockings of the prostitute leaning in the doorway may be, too, but I doubt it. We are assailed on all sides by the news media's depiction of depravity, dissolution, grief, and invaded privacy. The media seem unable to distinguish between pathos and depravity.

In 1620, survivors of vicious religious persecution in England banded together in Leyden, Holland, and in early September they crowded into the tiny *Mayflower* for the 66 days of rough sailing to Cape Cod. Half of those pilgrims died that first winter, mostly of pneumonia and scurvy, leaving "scarcely 50 souls, including women and children." By the following autumn, though, they had made a peace treaty with the

Indians, had completed seven homes and four public buildings, and had food in store for the winter. "Our harvest being gotten in, our governor sent forth four men on fowling so that we might after a more special manner rejoice together," wrote Edward Winslow to a friend in England. Chief Massasoit brought along 90 of his Indians and contributed four deer to the feast, staying three days and "enjoying much feasting and entertainment."

There is no indication the founders of our Thanksgiving Day dwelt on their troubles, which were many and real, or the sordid, dreary things of life, of which they had witnessed more than their share. Quite the contrary; they heeded instead the admonition of one of their predecessors who, in a Roman jail himself, wrote his persecuted Philippian brethren, "whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report; if there be any virtue, and if there be any praise, think on *these* things."

Should we, in this much blessed nation, do less?

J.B.T.



Happy
Thanksgiving

What's In a Name?

Whoever heard of Salvatore Garagna? Nobody.

Salvatore was the eleventh of twelve children of an impoverished Italian bootmaker in Brooklyn. Not much for starters. Not much promise that you would ever hear of him. He died in September at the age of 87.

Salvatore taught himself to play his father's old accordion and the snare drum. At 16 he left home to be a drummer with a touring carnival, where he learned to play an old piano he bought with money he earned. He went on to become pianist for the films of silent screen star Corinne Griffin. He changed his name to Harry Warren.

Whoever heard of Harry Warren?

Most of you, probably, but glory fades, and maybe you have forgotten about him.

Whoever heard of *Chattanooga Choo-Choo*? EVERYBODY!

Well, Harry wrote it, along with *September in the Rain*, *There'll Never Be Another You*, *You'll Never Know*, to mention a few of the more than 300 he wrote for more than 50 Hollywood musicals, winning in the process three Academy Awards. In fact, with lyricist Al Durbin he launched the Hollywood musical era with his *42nd Street* in 1932. Now do you remember Harry Warren, née Salvatore Garagna?

Cynical Marc Antony (or maybe cynical Will Shakespeare) said the evil men do lives after them, but the good is oft interred with their bones. Well, not so for Harry Warren. He is remembered for his works—as the Good Book says, "... that they may rest from their labors; and their works do follow after them."

Maybe if he had stayed Salvatore Garagna you would have remembered his name. Why did he change it? Was he ashamed of his heritage? Mad at his relatives? Salvatore grew up in a day when people were proud to be American, and to be American one really had to have an Anglo-Saxon name, didn't one? I'll bet that was the reason. Some did it just to be like everybody else, but I'll bet Salvatore did it because he was *proud* and *happy* to be an American, to live in a land where the son of a poor Italian immigrant could become a famous composer. But I could be wrong.

So, whoever heard of Joe Green?

The mean football player?

No; the one who wrote *Aida*, *Il Trovatore*, *Rigoletto*. . . .

J.B.T.



Nutritional Assessment: A Dietitian's Tool

To the Editor:

A nutritional assessment of the hospitalized patient has become a new and important tool of a registered dietitian for defining the nutritional status of a patient.

Once the nutritional status has been defined, the physician and dietitian can determine the appropriate nutritional support.

The nutritional assessment includes a dietary history and anthropometric, biochemical, and immunological testing. It also includes a record of the patient's present weight, usual weight and ideal body weight, as protein-calorie malnutrition might be impending in a patient with a 10% weight loss over a three-month period. Each parameter is essential for an accurate assessment of a patient's nutritional status.

Anthropometric measurements are used to determine a patient's fat and protein stores. The tricep skinfold thickness measurement assesses the fat stores of a patient. The protein stores are assessed by measuring the arm circumference and then calculating the arm muscle circumference.

The biochemical tests include a serum albumin, total lymphocyte and creatinine-height index. These tests are more sensitive for determining the visceral protein status of a patient.

A serum albumin, along with changes in arm muscle circumference, is a reliable indicator of visceral protein status. The creatinine-height index is used to measure lean body mass. The creatinine-height index is determined by a 24-hour urinary creatinine of a patient divided by the ideal urinary creatinine of a normal male of the same height.

A nutritional assessment is easy for the dietitian to do and relatively inexpensive to the patient. Deficits of these parameters will determine the degree of a patient's malnutrition, and at this point the physician and the dietitian can begin an aggressive course to restoring the patient's nutritional status.

Mrs. Frances Crain
Chairman, Public Relations
Tennessee Dietetic Association
255 N. Avalon
Memphis, TN 38112



Robert Goodwyn Allen, age 53. Died September 15, 1981. Graduate of University of Tennessee College of Medicine. Member of Memphis-Shelby County Medical Society.

Thomas G. Dorrity, age 66. Died August 31, 1981. Graduate of University of Tennessee College of Medicine. Member of Memphis-Shelby County Medical Society.

Leonard Joseph Vernon, age 60. Died May 2, 1981. Graduate of McGill University College of Medicine. Member of Memphis-Shelby County Medical Society.

new members

The JOURNAL takes this opportunity to welcome these new members to the Tennessee Medical Association.

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CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY

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Timothy Joe Beasley, M.D., Chattanooga
Jerry Doyle Clark, M.D., Chattanooga
S. Rao Gorantla, M.D., Chattanooga

COCKE COUNTY MEDICAL SOCIETY

Michael T. Hood, M.D., Newport

CONSOLIDATED MEDICAL ASSEMBLY OF WEST TENNESSEE

Rosaire M. Dubrule, M.D., Jackson
Frank R. Pennington, M.D., Jackson
Robert A. Vegors, M.D., Jackson

KNOXVILLE ACADEMY OF MEDICINE

Abdul H. Khan, M.D., Knoxville

MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

John Clayton Church, M.D., Memphis
Morris Leonard Gavant, M.D., Memphis
John R. Hovious, M.D., Memphis
Mohandas S. Karkera, M.D., Memphis
Devaiah Pagidipati, M.D., Memphis

NASHVILLE ACADEMY OF MEDICINE

Jeanne F. Ballinger, M.D., Nashville
Jeffrey M. Barrett, M.D., Nashville
Charles W. Eckstein, M.D., Nashville
William J. Fulkerson, Jr., M.D., Nashville
Howard W. Jones, III, M.D., Nashville
David S. Knapp, M.D., Madison
Margaret Linn (student), Nashville
David E. McKee, M.D., Madison
Elizabeth P. Pierce, M.D., Goodlettsville
Roscoe R. Robinson, M.D., Nashville
Kerry Schumaker, M.D., Nashville
Radford C. Stewart, III, M.D., Nashville
Christina M. Ynares, M.D., Nashville

**ROANE-ANDERSON COUNTY
MEDICAL SOCIETY**

Miriam B. Tedder, M.D., Harriman

ROBERTSON COUNTY MEDICAL SOCIETY

Neil Dressler, M.D., Springfield

**RUTHERFORD COUNTY/STONES RIVER
ACADEMY OF MEDICINE**

Susan T. Andrews, M.D., Murfreesboro

Randall C. Rickard, M.D., Murfreesboro

SUMNER COUNTY MEDICAL SOCIETY

John C. McAleavy, M.D., Hendersonville

John Paul McNulty, M.D., Portland

James N. Moore, M.D., White House

**WASHINGTON-CARTER-UNICOI COUNTY
MEDICAL ASSOCIATION**

Robert A. Lebow, M.D., Johnson City

personal news

David C. Chaffin, M.D., Sevierville, has received an "Outstanding Young Men of America" award for 1981.

John O. Williams, M.D., Mt. Pleasant, has been named a finalist for the 1981 "Family Doctor of the Year" award, sponsored by a national magazine and the American Academy of Family Physicians.

national news

From the AMA's Office in Washington, D.C.

TMA Members Receive AMA Physician's Recognition Award

Seventeen TMA members qualified for the AMA Physician's Recognition Award during August, 1981.

To qualify for the PRA, a minimum of 150 hours of continuing medical education must be earned over a three-year period; 60 of these hours must be Category 1.

This list does not include members who reside in other states. Names of additional PRA recipients will be published as they are received from AMA.

Robert B. Adkins, M.D., Nashville
Paul E. Brown, M.D., Johnson City
Warner L. Clark, M.D., Church Hill
Robert C. Coddington, M.D., Chattanooga
Leland R. Cornelius, M.D., Germantown
James W. Felch, M.D., Nashville
Marshall F. Goldberg, M.D., Memphis
Robert E. Handte, M.D., Nashville
Robert D. Hays, M.D., Cleveland
Aurelio P. Inclan, M.D., Dyersburg
Frances K. Patterson, M.D., Knoxville
James A. Pitcock, M.D., Memphis
Omer C. Renner, M.D., Morristown
John C. Rylands, M.D., Knoxville
William F. Schmidt, M.D., Bristol
Dean G. Taylor, M.D., Nashville
Ralph E. Wesley, M.D., Nashville

More Budget Cuts Coming

The late summer doldrums of the nation's capital were snapped with the return of Congress and top federal officials, including President Reagan, from summer vacations.

But the decision by the administration to seek additional reductions in federal spending has tossed aside a hoped-for congressional adjournment date of mid-October with mid-November being substituted. And this date is thought by many to be overly optimistic.

Despite its earlier history-making budget reduction of some \$30 billion, the administration is now faced with an estimated \$60-billion deficit in this fiscal year (Oct. 1, 1981) with even higher red ink margins forecast in the next two years.

In its drive to get the deficit down to \$42.5 billion, the pre-August guess, some \$18 billion of new cuts must be legislated. Health programs aren't a major target area, but few will escape the economy ax.

The President's urgent request for a second round of budget cuts would involve a reduction of \$1 billion or more in federal health programs, already hit hard by the budget reconciliation measure approved last August.

Most of the President's proposed savings—\$8.4 billion—would come from a 12%, across-the-board slice in appropriations for all domestic programs. The health programs at the Health and Human Services (HHS) Department currently are budgeted at about \$6.5 billion, meaning they would be reduced about

\$780 million. Further cuts apparently would come from Medicare and Medicaid.

The President said in a nationally televised speech that he will seek \$2.6 billion in cuts from entitlement programs in the budget not subject to the appropriations process. These include Medicare and Medicaid, but how much they would be hit remains to be seen.

The initial reaction from Congress was that the administration will have a much tougher time winning over the lawmakers this time around because politically popular programs would have to be cut to the bone. Many lawmakers talked in terms of paring defense outlays more than requested by the administration and going easier on the domestic side.

In his speech, the chief executive also asked Congress to authorize interfund borrowing among the Social Security trust funds, a proposal that would allow the Medicare trust fund—in the black at the moment—to be tapped to help out the red-ink retirement funds. President Reagan described this “as a temporary measure to give us time to seek a permanent solution.”

The larger issue of bailing out Social Security over the long haul would be placed before a bipartisan commission “which will review all the options and come up with a plan that assures the fiscal integrity of Social Security. . . .”

Budget Director David Stockman said a weapon the administration may be forced to use to achieve the cuts could be the presidential veto of appropriations bills that exceed administration targets. He noted that a two-thirds vote is required to overturn a veto, implying that Congress would not be able to muster that margin on presidential turn-downs.

Meanwhile, the government (as of Oct. 1) is operating on a continuing resolution at the expenditure levels of the past fiscal year.

FDA Regulation Curbs Proposed

Sen. Orrin Hatch (R-Utah), chairman of the Senate Labor and Human Resources Committee, is sponsoring legislation to modify the Delaney Clause that is an absolute prohibition on food additives found to cause cancer in man or animals. The clause has been attacked over the years as imposing too strict a ban on additives that have caused cancer only in test animals and in enormous doses. The new bill would apply only to substances that pose “a significant risk to health.”

House hearings are also slated on proposals for “consumer choice” national health plans, though the administration’s bill isn’t due until the end of the year.

Legislation has also been introduced to place a moratorium on Federal Trade Commission activities

involving the learned professions, including medicine. There are 46 sponsors in the House.

In addition, major measures have been introduced to reform federal regulatory procedures to curb unnecessary regulations and give Congress the power to veto rules that overstep agency authority.

Block Grant Program Ready To Go

The administration’s health block grant program is slated to shortly wheel into operation, but some states may decide to delay for as long as a year.

At a series of regional conferences, administration officials have been assuring state officials they will be allowed “maximum flexibility” in administering the programs covered under the block grants.

Edward Brandt, M.D., Assistant Secretary for Health at the HHS Department, said his agency is “carrying out the principles of flexibility, minimum federal intrusiveness, and absolute neutrality in its implementation activities.”

Dr. Brandt noted that states may choose to assume responsibility for administering the block grant programs Oct. 1 or to phase in the operation of the blocks during the fiscal year starting Oct. 1.

Congress put some 20 Public Health Service programs into four block grants—Preventive Health; Maternal and Child Health; Mental, Drug and Alcohol; and Community Health Centers. States can administer the block grant funds with much more freedom than existed for the categorical programs.

Dr. Brandt told the Block Grant Regional Conference in Dallas this month that HHS is authorized to continue making awards to individual program grantees in states until the states assume control over the block grants. “But we will only take this action if an existing grant comes up for renewal before you (the states) take over the block containing that particular grant program.”

The amount of money the states will receive for the block grants won’t be known until Congress completes the appropriations process. Dr. Brandt said “the best I can tell you now is that we are going over prior year obligation figures for each program in the blocks to establish the basis for calculating your particular state’s share of each block.”

The law requires each state to tell how it intends to spend its block grant funds. Citizens are supposed to take part in the decision-making process at the state level, but “we will have no federal guidelines or proposed federal regulations concerning public participation.”

Said Dr. Brandt: “The approach we have taken is designed to make sure that the states will truly retain their flexibility and responsibility for decision-

making. We intend to regulate only in a few absolutely essential areas. But for most provisions of the block grant law, there will be no regulatory guidance. This is certainly the intent of the block grant legislation proposed by the President and enacted by the Congress."

AMPAC Expansion Urged

The senators heading the Republican and Democratic campaign committees have said the American Medical Political Action Committee (AMPAC) played an important role in the last elections. They urged an even greater role for AMPAC in the future.

Addressing AMPAC's political education conference in Washington, D.C., Sen. Wendell Ford (D-Ky.) told 400 AMPAC members that "you people wrote the book on how to make a PAC work and without question your organization's record of success stands alone."

Describing AMPAC as "a force to be reckoned with," Sen. Ford said in prepared remarks that PACS exert a positive influence on the political process. "Keep up the good work," he said, "and remember that the bottom line is a more responsive and responsible government."

"If ever there was a time for individuals and groups to come together to help minimize the impact of the budget reductions, that time is now," he said. "The need will never be greater or more urgent because the government can no longer afford to carry out all responsibilities."

Sen. John Heinz (R-Pa.) said that without the help of AMPAC and similar groups the Republicans would not have been able to capture the Senate where GOP control was essential for President Reagan's legislative victories. "We will bring the budget in line; that you can depend on," the senator said.

AMPAC Board Chairman John Smith, M.D., said the 1980s will bring sweeping changes. "We must play a major role. Our voices will be heard and our presence felt," said the San Antonio physician. Dr. Smith said AMPAC "must be ready to influence positively the decisions made. Medicine and politics do go together."

James Sammons, M.D., executive vice president of the American Medical Association, hailed the 20th anniversary of AMPAC, one of the first political action groups founded. Dr. Sammons said a survey for the AMA showed that 65% of all physicians agree that it is the professional responsibility of physicians to support political representative actions undertaken by the profession. Most physicians also agree that "AMPAC has been established to represent the political interests of physicians regarding the support of political candidates."

However, these high percentages of support are not reflected in AMPAC membership, Dr. Sammons noted, with only 12% of all physicians and 22% of AMA members contributors to AMPAC. He urged the AMPAC audience to make increased membership a top priority.

Make sure that every physician is asked to join, said Dr. Sammons. "We have too often heard doctors say they have not been asked."

The AMPAC members were briefed by top lawmakers and political experts on the political scene in Washington and on the outlook for the future. Some 200 senators and representatives attended a congressional reception hosted by AMPAC.

Edward Rollins, Deputy White House Assistant for Political Affairs, said part of the success of the Reagan administration "has been due to the efforts of groups such as AMPAC." He expressed optimism that the administration will be able to build on the 1980 coalition of support and pick up seats in the House and Senate in the 1982 elections despite the tradition that the party in power loses during off-year elections.

Rep. Hal Daub (R-Neb.) said PACs are a healthy addition to the right of groups to exercise free speech. Political action committees provide valuable services for elected officials and their independent expenditures "serve the constituencies very well."

Tony Coelho (D-Cal.), chairman of the House Democratic Congressional Committee, described how he has re-tooled the committee following the last elections in order to make it more effective, including the appointment of an official to deal with PACs. He predicted the Democrats will gain ten House seats a year from November and strengthen their control of the House.

Rep. Newton Gingrich (R-Ga.) said AMPAC and similar groups are "probably more responsible for congressional legislative victories of the administration this year than President Reagan." The PAC movement is more significant and important to the future of the nation than the results of the last election, Gingrich said.

Giving to a political action committee "is the act of a free citizen who is able to say 'I was involved; I tried,'" he said.

Pulitzer Prize-winning columnist David Broder told the AMPAC audience that the last nine months has been his "most interesting and exciting time in Washington."

"The most extraordinary changes have occurred. A lot of theories have been knocked into a cocked hat including the theory that government is incapable of functioning."

"The Reagan administration and congressional Republicans have put their act together and through political skills have energized government," Broder said. "It has been an impressive, dazzling performance so far."

PSROs Rejuvenated

Thirteen Professional Standards Review Organizations (PSROs) slated to be closed have been given a reprieve by HHS's Health Care Financing Administration (HCFA).

The 13 were part of a group of 46 slated to be terminated as part of the administration's campaign to phase out the PSRO program.

The PSROs targeted for closure have been given appeal rights and the tentative termination decisions in 13 states were reversed.

The PSROs given new life are:

- Ohio Area 6 — Region VI Peer Review Corporation, Akron.
- Oklahoma Statewide PSRO — Oklahoma Foundation for Peer Review Inc., Oklahoma City.
- Louisiana Area 3 — Louisiana Medical Standards Foundation, Inc., Baton Rouge.
- Arizona Area 1 — Northern Arizona Medical Evaluation System, Phoenix.
- Pennsylvania Area 1 — Northwestern Pennsylvania PSRO, Erie.
- Vermont Statewide PSRO — Vermont Professional Standards Review Organization, Inc., S. Burlington.
- New Jersey Area 5 — Judson County PSRO, Jersey City.
- Hawaii — Pacific PSRO, Inc., Honolulu.
- Pennsylvania Area 13 — Physicians Peer Review Association, Inc., Poland.
- Georgia Statewide PSRO — The Georgia Medical Care Foundation, Atlanta.
- Michigan Area 2 — Michigan Area II PSRO, Traverse City.
- Florida Area 8 — Brevard-Volusia PSRO.

Pot Pushed for Ca Rx

Two congressmen want the federal government to recognize the therapeutic benefits of marijuana for cancer and glaucoma patients.

Reps. Stewart McKinney (R-Conn.) and Newt Gingrich (R-Ga.) have introduced a bill that would amend the Controlled Substances Act to recognize the medical use of marijuana, without affecting penalties for social use.

Federal law defines marijuana as a drug with no acceptable medical use, and it is available by the federal government only for research. This makes it difficult for patients in 32 states where its medical use is allowed to obtain the drug legally.

Marijuana is said to treat the adverse side effects of cancer chemotherapy and to reduce intraocular pressure in glaucoma patients.

POWs' Benefits Expanded

The nation's 100,000 former prisoners of war will have an easier time receiving health care benefits under a law signed by President Reagan.

The law waives the two-year period following service during which psychological disorders must manifest themselves in order to be classified as service-connected. It also provides that former POWs who were imprisoned for as few as 30 days may claim certain disabilities as service-connected without furnishing medical proof. Previously, the period was six months.

Former POWs sometimes have trouble establishing claims for service-connected disabilities because of inadequate repatriation medical examinations, the Veterans Administration says. A joint VA-Dept. of Defense study in 1980 found that POWs have higher incidences of physiological and psychological disabilities than those not taken prisoner, because of starvation diets, lack of medical care, and inhumane treatment during imprisonment, the VA said.

The Prisoner of War Health Care Benefits Act of 1981 also establishes an advisory committee on former POWs which will report biennially to the VA administrator and to Congress on POW problems in compensation, health care, and rehabilitation.

announcements

CALENDAR OF MEETINGS

NATIONAL

Dec. 3-5	American Epilepsy Society — Waldorf Astoria, New York
Dec. 4-5	American College of Chemosurgery — San Francisco
Dec. 5-8	American Association for Respiratory Therapy — Anaheim, Calif.
Dec. 5-8	American Society of Hematology — Hilton Palacis del Rio, San Antonio, Tex.
Dec. 5-10	American Academy of Dermatology — San Francisco Hilton, San Francisco
Jan. 11-15	Miami Winter Symposium — From Gene to Protein: Translation into Biotechnology (Univ. of Miami) — Miami
Jan. 21-26	American Academy of Orthopaedic Surgeons — New Orleans

The continuing medical education accreditation program of the TMA has full approval by the Accreditation Council for Continuing Medical Education. An accredited institution or organization may designate for Category 1 credit toward the AMA Physician's Recognition Award those CME activities that meet appropriate guidelines. If you wish information as to how your hospital or society may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203.

IMPORTANT NOTICE

Published in this section are all educational opportunities which come to our attention which might be of interest to our membership. As some of these are very long, full year schedules, and others are detailed descriptions of courses, in order to conserve space, most of them will be published in only one issue of the Journal.

IN TENNESSEE

VANDERBILT UNIVERSITY

Clinical Training Program

Opportunities for advanced clinical education for physicians in family practice and in various subspecialties have been developed by the School of Medicine and the Division of Continuing Education of Vanderbilt University. The practicing physician, with the guidance of the participating department chairman, can plan an individualized program of one to four weeks to meet recognized needs and interests. The experience will include contact with patients, discussion with clinical and academic faculty, conferences, ward rounds, learning individual procedures, observing new surgical techniques, and access to excellent library resources. Experience in more than one discipline may be included.

Participating Departments and Divisions

Allergy & Immunology	Samuel Marney, M.D.
Anesthesiology	Bradley E. Smith, M.D.
Cardiology	Gottlieb C. Friesinger, III, M.D.
Chest Diseases	James D. Snell, M.D.
Clinical Pharmacology	John A. Oates, M.D.
Dermatology	Lloyd King, M.D.
Diabetes	Oscar B. Crofford, M.D.
Endocrinology	Grant W. Liddle, M.D.
Gastroenterology	Steven Schenker, M.D.
General Internal Medicine	W. Anderson Spickard, M.D.
Hematology	Sanford B. Krantz, M.D.
Infectious Diseases	Zell A. McGee, M.D.
Medicine	Grant W. Liddle, M.D.
Neurology	Gerald M. Fenichel, M.D.
Obstetrics & Gynecology	Lonnie S. Burnett, M.D.
Oncology	Robert Oldham, M.D.
Orthopedics	Paul W. Griffin, M.D.
Pathology	William H. Hartmann, M.D.
Pediatrics	David T. Karzon, M.D.
Psychiatry	Marc H. Hollender, M.D.
Radiology	A. Everette James, Jr., Sc.M., J.D., M.D.
Renal Diseases	H. Earl Ginn, M.D.
Rheumatology	Theodore Pincus, M.D.
Surgery	
Cancer Chemotherapy	Vernon H. Reynolds, M.D.
General	H. William Scott, Jr., M.D.
Neurological	William F. Meacham, M.D.
Ophthalmology	James H. Elliott, M.D.
Oral	H. David Hall, D.M.D.

Renal Transplantation	Robert E. Richie, M.D.
Thoracic & Cardiac	Harvey W. Bender, M.D.
Urology	Frederick K. Kirchner, Jr., M.D.

Eligibility: All licensed physicians are eligible. **Administrative Fee:** \$200 per week. **Credit:** AMA Physician's Recognition Award (Category 1) and AAFP Continuing Education Accreditation. **Application:** For further information and application, contact Continuing Medical Education, Vanderbilt University Medical Center, Nashville, TN 37232, Tel. (615) 322-2716.

Continuing Education Schedule

Dec. 4-5	High Risk Obstetrics Seminar and the Everett M. Clayton Memorial Lecture (10 hours)
Dec. 5-6	Annual Update in Anesthesiology

For information contact Division of Continuing Medical Education, Vanderbilt School of Medicine, Nashville, TN 37232, Tel. (615) 322-2716.

MEHARRY MEDICAL COLLEGE

Extended Continuing Education Program

Arrangements have been made with the following services and departments in the medical school to allow practicing physicians to participate in that service's activities for a period of one to four weeks. This program provides an opportunity for physicians to study in depth for a specified period. The schedule of activities is individualized in response to the physician's request by the participating department. The experience includes conferences, ward rounds, audiovisual materials and contact with patients, residents and faculty.

Participating Departments

Anesthesiology	Ramon S. Harris, M.D.
Family Practice	John Arradondo, M.D.
Internal Medicine	
Cardiology	John Thomas, M.D.
Chest Disease	Kermit R. Brown, M.D.
Dermatology	Qamar A. Kahn, M.D.
Gastroenterology	Joseph M. Stinson, M.D.
General Medicine	Paul A. Talley, M.D.
Hematology/Oncology	Edward A. Mays, M.D.
Neurology	Thomas W. Johnson, M.D.
Obstetrics & Gynecology	David Horowitz, M.D.
Ophthalmology	Ludwald O. P. Perry, M.D.
Orthopedics	Buntwal M. Somayaji, M.D.
Pathology	Edward A. Mays, M.D.
Pediatrics	Robert S. Hardy, M.D.
Surgery	Calvin L. Calhoun, Sr., M.D.
Thoracic and Cardiovascular	Gregory Samaras, M.D.
Urology	Henry W. Foster, M.D.
	Axel C. Hansen, M.D.
	Wallace T. Dooley, M.D.
	Louis D. Green, M.D.
	John C. Ashhurst, M.D.
	E. Perry Crump, M.D.
	Louis J. Bernard, M.D.
	Charles E. Brown, M.D.
	David B. Todd, M.D.
	Ira D. Thompson, M.D.
	Marcelle R. Hamberg, M.D.

Fee: \$100 per week. *Credit:* AMA Physician's Recognition Award (Category 1), AAFP Continuing Education Accreditation, and Continuing Education Units by Meharry Medical College. *Application:* For further information contact Frank A. Perry, Sr., M.D., Director, Continuing Education, Meharry Medical College, 1005 18th Ave. North, Nashville, TN 37208, Tel. (615) 327-6235.

UNIVERSITY OF TENNESSEE

Continuing Education Schedule

This comprehensive listing of UTCHS courses includes programs of the Chattanooga, Knoxville, and Memphis units. The codes (C), (K), and (M) indicate the continuing education unit handling the arrangements for a particular program.

Dec. 3-5	(C)	Basic Cardiology, EKGs and Therapy
Feb. 1-3	(K)	Emergency Medicine Symposium
Feb. 6-13	(K)	4th Annual KAM Education Ski Meeting
March 14-19	(M)	15th Annual Family Practice Review Course
April 5-7	(K)	Hypertension
June 10-12	(K)	ENT and Otolaryngology

Community-Based CME

Knoxville Campus

Blount Memorial Hospital; Maryville, Tenn.
Every Tuesday; 7-8 a.m. (1 hr. credit)

Jellico Hospital; Jellico, Tenn.
Monthly, third Tuesday; 7-9 p.m. (2 hrs. credit)

Morristown-Hamblen County Hospital; Morristown, Tenn.
Alternate months, third Tuesday; 6:30-8 p.m. (1.5 hrs. credit)

Sweetwater Community Hospital; Sweetwater, Tenn.
Monthly, second Wednesday; 12:00 noon (1 hr. credit)

Takoma Hospital; Greeneville, Tenn.
Monthly, dates vary; 6:30 p.m. (1-2 hrs. credit)

Memphis Campus

UPDATES IN MEDICINE

Carroll County Hospital; Huntingdon, Tenn.
McKenzie Memorial Hospital; McKenzie, Tenn.
Henry County Hospital; Paris, Tenn.
Monthly, third Monday; 6:15-9 p.m. (2 hrs. credit); locations rotate.

Nashville Memorial Hospital, Madison, Tenn.
Monthly, third Tuesday; 12:00 noon (1 hr. credit)

If you would like assistance in planning a community-based CME program, contact the Associate Dean for CME and every attempt will be made to assist you through one of our three campuses.

For further information about any of these courses, please

call the appropriate individuals below:

- (C) Mr. LeRoy J. Pickles, Chattanooga
Tel. (615) 756-3370
- (K) Ms. Kay Laurent, Knoxville
Tel. (615) 971-3345
- (M) Ms. Grace Wagner, Memphis
Tel. (901) 528-5547

or write or telephone: James E. Farris, Ed.D., Assistant Dean for CME, University of Tennessee College of Medicine, 800 Madison Ave., Memphis, TN 38163, Tel. (901) 528-5530.

IN SURROUNDING STATES

UNIVERSITY OF KENTUCKY

Mini-Residencies in Office Management Of Emotional Problems

The objective of this course is to give physicians an ideal emotional counseling technique that fits busy office practices. The technique uses a concept of emotions that is consistent with human anatomy and psychophysiology. Yet, the technique requires no more physician time or patient cost than routine evaluations of new patients. Finally, the technique is readily understandable and easy for practitioners to apply.

One, two and three week courses. Minimum of 40 hours per week. *Tuition Fee:* \$350 per week for the 1st & 2nd week of training; \$500 for 3rd week of supervised practice with patients in the Intensive RBT Treatment Program.

For further information contact Maxie C. Maultsby, Jr., M.D., Office of Continuing Medical Education, Dept. of RBT, University of Kentucky, Lexington, KY 40506.

BOWMAN GRAY

Courses in Ultrasound

Several eight-week courses in sonic medicine will be offered from Sept. 14-Nov. 6, 1981; Jan. 11-March 5, 1982; and April 26-June 18, 1982. *Credit:* 35 hours per week in AMA Category 1.

The following real time courses will also be given: Sept. 10-11, 1981 and Dec. 3-4, 1981 (obstetrics); Dec. 10-12, 1981 (pediatrics); March 22-26, 1982 (abdomen); April 15-16, 1982 (breast).

For information contact James F. Martin, M.D., Center for Medical Ultrasound, Bowman Gray School of Medicine, Winston-Salem, NC 27103, Tel. (919) 748-4505.

OF SPECIAL INTEREST

AMERICAN CANCER SOCIETY

Dec. 8-10 Gastrointestinal Cancer 1981—
Fontainebleau Hilton Hotel, Miami Beach.

Credit: 13 hours AMA Category 1.

For information contact Nicholas G. Bottiglieri, M.D., American Cancer Society, National Conference on Gastrointestinal Cancer 1981, 777 Third Ave., New York, NY 10017, Tel. (212) 371-2900.

AMERICAN LUNG ASSOCIATION OF LOUISIANA

Jan. 13-16 SUPERCOURSE VII—A Clinical Course on Critical Pulmonary Care (cosponsored by American Thoracic Society of Louisiana)—Fairmont Hotel, New Orleans. *Credit:* AMA Category 1. *Fee:* \$225 for physicians; \$195 for fellows, residents and interns.

For information contact Course Coordinator, American Lung Association of Louisiana, 333 St. Charles Ave., Suite 500, New Orleans, LA 70130, Tel. (504) 523-5864.

RUSH-PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER

Dec. 9-11 Neurology for the Non-Neurologist—Chicago Marriott Hotel, Chicago. *Credit:* 20 hours AMA Category 1.

For information contact Marilyn Jones, Office of Continuing Education, Rush-Presbyterian-St. Luke's Medical

Center, 600 S. Paulina, Chicago, IL 60612, Tel. (312) 942-7095.

HAIR REPLACEMENT SYMPOSIUM

Feb. 3-4 International Advanced Hair Replacement Symposium (sponsored by the American Academy of Facial Plastic and Reconstructive Surgery)—Birmingham, Ala. *Fee:* \$420.

For information contact Dr. D. B. Stough, III, Program Director, Doctors Park, Hot Springs, AR 71901.

AMERICAN COLLEGE OF CHEST PHYSICIANS

Feb. 4-6 Hypertension 1982: Practical Management Considerations for the Physician in Clinical Practice—Sundial Beach and Tennis Resort, Sanibel Island, Fla. *Credit:* 16 hours AMA Category 1. *Fee:* ACCP members \$190; nonmembers \$220.

March 24-27 International Conference on Occupational Lung Disease—Hyatt Regency Hotel, Chicago.

For information contact Department of Education, American College of Chest Physicians, 911 Busse Hwy., Park Ridge, IL 60068.

Leo N. Levi National Arthritis Hospital

Dedicated to the Treatment of Arthritis and Related Disease



Fred Robertson, M.D.
Medical Director
Diplomate, American Board
of Internal Medicine
Subspecialty of Rheumatology

For Information Call: (501) 624-1281
Or Write: P.O. Box 850
Hot Springs, Arkansas 71901

Preventive Health Care for the 1980s

What is preventive medicine? Actually, what can it prevent?

Preventive medicine may be defined as that branch of medicine dealing with the prevention of disease and disability and the maintenance of good health. Until recent decades, it was largely the domain of the state and local health departments, and at the federal level, of the U.S. Public Health Service.

Recently, perhaps due to people's increasing interests in their own well-being, the costs of medical care, and the stimulus of many interested groups, preventive medicine has assumed a new thrust. In 1979, the U.S. Surgeon General released the detailed report, "Healthy People," which emphasized preventive medicine and described goals and directions for improving the health of U.S. citizens. Now preventive medicine is an important consideration for private practice physicians, as well as for others in health-related fields.

The Physician's Role

What can the individual physician do?

First thing is vaccination against infectious diseases—polio, measles, whooping cough, diphtheria, tetanus, influenza. The smallpox vaccine worked so well that smallpox has vanished from the globe, and the vaccinations are no longer needed.

Immunizations have brought radical changes to the practice of medicine. Many of the killer diseases of the past are gone or under control. Proper care of expectant mothers during pregnancy and of their newborn infants has high priority in preventive care. Some of the ills of pregnancy and childbirth, and many problems of newborns, can be prevented by proper prenatal care and medical attention.

Family planning is another aspect. Modern science permits couples to decide how many children they will have, and at what time intervals the new ones will arrive. Spacing of pregnancies can have a vital impact on the health of mother and child and on the emotional well-being of the family.

Finding and treating those with high blood pressure is still another aspect of preventive health care that can save many lives and prevent much

illness. High blood pressure is a contributing factor in many ailments of the heart and blood system.

Public Health Measures

Much of preventive health care is beyond the scope of the individual physician, and requires the efforts of society as a whole, that is, organized public health efforts. The pure food and drug laws, for instance, have brought changes for the better in the products offered to the American public.

Fluoridation of public water supplies has been credited with substantial reduction in dental cavities. Occupational health and safety rules have attacked work-related illness and injury. Seat belts for motorists and protective helmets for cyclists have prevented tens of thousands of injuries and deaths.

Regulations safeguarding poisonous chemicals and other toxic substances are making the products of the marketplace safer. The dangers of lead poisoning are now so well known that relatively little lead is used in consumer products, particularly house paints.

Environmental health rules are helping to clean up the air we breathe. For many years most American communities have provided purified water supplies that have made epidemics of typhoid, cholera, and summer diarrhea of infants things of the past.

All of these are things that can best be carried out by society as a whole through its governmental units.

Lifestyle Decisions

Still another aspect of preventive health care requires the cooperation of both public and private sectors, and hinges primarily on the personal lifestyle decisions of the individual.

It is the individual who makes the decision to smoke tobacco, to overeat to the point of obesity, to shun regular exercise, to overindulge in alcoholic beverages, to misuse mind-altering drugs.

The health care community has for many years carried out vigorous programs of health education to inform citizens of the hazards of these decisions affecting health. But too many individuals have

been unable to kick the smoking habit. Too many are still overweight and thinking about starting that reducing diet "after the holidays." About half of all auto crashes are related to excessive alcohol intake by drivers.

Too many men and women still get their exercise walking from house to car and car to workplace. Too many still consume much more alcohol than their systems can successfully absorb.

A major challenge facing medicine and the entire public alike is: How do we motivate people to adopt the healthy lifestyle? How does society persuade the fat person to make a decision to eat less, the sedentary person to get out and exercise, the smoker to quit, the drinker to cut down or cut out alcohol? Can the physician do it?

There are no pat answers. But some of the best minds on the national scene are working on it. Massive health education programs, sparked in part by years of activity by the American Medical Association, state and county medical societies, and many others, have reached millions of people with the message of the healthy lifestyle.

Progress Noted

There has been progress. Many young people have not begun to smoke. Many smokers have quit. Millions of Americans of both sexes and all ages are exercising, at least to some extent. Joggers are found on every path in all kinds of weather. Health clubs proliferate and business people are playing racquetball during the noon hour. At cocktail parties, white wine now is as popular as the stronger beverages.

Americans have not yet solved the problem of eating too much, consuming more calories than needed to maintain desirable weight. There are millions of dieters. Most Americans have many times cut back on food for a few weeks to take off some unwanted pounds. But most still have not faced up to the realities of eating—the reduced intake must become a new way of life if the pounds shed so painfully are to stay off. Return to old eating habits brings those pounds right back again.

The medical profession, nutritionists, diet scientists and many others still are seeking ways and means of persuading the American public to consume fewer calories. The ready answer is still lacking.

An integral part of any preventive medicine program long has been the periodic "physical," better called "periodic medical evaluation." Today it has become widespread, going under such high-sounding names as "multiphasic screening." While periodic examinations can detect latent or unanticipated illness, how often they should be done and on whom is a matter of medi-

cal controversy.

Most physicians believe that an annual examination for the healthy adult under 50 or 60 years old is not necessary. Checkups for such persons every few years probably are enough. But those with chronic health problems and older persons should see their doctors more frequently. And it is prudent to take advantage of one of the many community programs now offered to screen for high blood pressure, diabetes, and other common ills.

Other Professionals

Many individuals in the community contribute to preventive health care in addition to physicians. The sanitarian supervises a city's milk supply to insure safety, the automotive engineer designs a windshield that is less damaging to the human head in a crash.

The building inspector helps to assure that human habitations are safe to occupy, the swimming instructor teaches youngsters how to get in the water without drowning.

In the decade of the 1980s one can expect continued interest in preventive health care. Prevention is offered as an alternative to visits to the doctor and periods in the hospital. This not only saves pain, discomfort and time lost from work; it also saves money.

Prevention experts point out, however, that there are limits to what can be accomplished, and that it would be a disservice to the public to oversell hope of perennial good health and long life.

Heredity plays an important role in the health of the individual, as does environment. But one cannot go back and select another set of parents. And one cannot always leave the still-polluted air of most cities unless he can find employment in a community with pure air. Communities cannot offer entirely pure air without imposing impossibly drastic measures, such as banning factories and all automobiles from the streets.

The Big Four killers of the 1980s are heart disease, stroke, cancer, and injuries, especially those related to autos. Changes in lifestyle can reduce the individual's risk of some of these. But even the healthiest lifestyle cannot insure that one will not get cancer, will not have a heart attack or a stroke. Safety regulations can reduce the risk of auto injuries, but no regulation can absolutely guarantee against a highway crash or a fall.

Preventive health care can do much to forestall illness and insure better health for many people. It can help people live longer, perhaps as long as an average of 85 years in another generation or two.

But no matter how careful we are, the death rate is still "one per person."

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The Blom-Singer Endoscopic Technique Under Local Anesthesia for Restoration of Voice After Laryngectomy

FOY B. MITCHELL, M.D.; RONALD H. KIRKLAND, M.D.; and
WINDSOR V. MORRISON, M.D.

An endoscopic technique for restoration of voice after laryngectomy was presented at the annual meeting of the American Laryngologic Association, Inc. in 1980 by Mark I. Singer, M.D. and Eric D. Blom, Ph.D.¹ as indicated in their original paper, "Restoration of Voice After Total Laryngectomy May Occur with Diversion of Exhaled Pulmonary Air into the Esophagus or Hypopharynx." The Blom-Singer voice prosthesis functions as a one-way valved stent which is placed endoscopically through a controlled midline tracheoesophageal (TE) puncture. This prosthesis placed through the TE fistula overcomes the technical problem of creating a passageway that permits free flow of air from the trachea into the esophagus without the passage of food or saliva from the gullet into the trachea.

In the original paper by Singer, all 60 patients had their TE puncture performed under general

anesthesia, as he feels that it is critical to perform the puncture under general anesthetic conditions. It is the purpose of this paper to present a series of TE punctures performed under local anesthesia.

At the Memphis Veterans Administration Medical Center (VA), the amount of operating room time available with general anesthesia is limited. For years all endoscopy performed by the otolaryngology service has been performed under local anesthesia. Initially because of necessity, the first TE punctures were placed under local anesthesia, for it seemed only logical that if one is able to perform laryngoscopy, rigid bronchoscopy, and rigid esophagoscopy under local anesthesia, one could easily place a Blom-Singer prosthesis using the same anesthetic techniques.

Preoperative Patient Evaluation

Each candidate for a Blom-Singer voice prosthesis has a preoperative evaluation consisting of:

- Stoma inspection — the stoma needs to be sufficiently large, properly shaped, and

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VOICE RESTORATION/Mitchell

well healed.

- Esophogram—showing absence of significant strictures.
- Lack of good esophageal speech.
- Being a motivated and physically capable patient, i.e., having good vision, good manual dexterity, good cerebration, no major psychological problems, and being fully cooperative.
- Patients with persistent or recurrent disease must be individually selected.
- Clearance by speech pathologist.
- Positive Taub test or equivalent (esophageal air insufflation).
- Hypopharynx and esophagus must easily accept a size 48-50 Hurst or Maloney mercury filled bougie.

Local Anesthetic Technique

One of the cornerstones of successful local anesthesia is adequate premedication. For an average adult this usually consists of a combination of an opiate, preferably morphine sulfate 12 mg, a small dose of atropine sulfate 0.4 mg, and an antihistamine such as promethazine hydrochloride (Phenergan) 25 mg or hydroxyzine pamoate (Vistaril) 50 mg. Morphine is usually the preferred opiate because of its greater effect in diminishing laryngospasm and cough. Sodium pentobarbital, 100 mg orally, is given at bedtime the evening before the procedure and again one hour before the procedure. Along with the sedative effect, barbiturates seem to be clinically effective in lessening the frequency of significant toxic reactions to topical anesthetic agents.² Every patient is taken to the operating room where an intravenous (IV) line is established for administration of any required medications. Diazepam (Valium) IV is used for additional sedation as necessary. All patients have cardiac monitoring and frequent evaluation of vital signs.

The patient is placed in the sitting position and the entire oral cavity and oropharynx is sprayed with tetracaine (Cetacaine). In allergic or asthmatic individuals, and in those who are cachectic, debilitated, or emphysematous, a spray of 2 ml of 2% lidocaine should be used instead.

Next, using a head light, bilateral glossopharyngeal blocks are performed using a 45° glossopharyngeal needle and 2% lidocaine. Two milliliters of 2% lidocaine is infiltrated posterior

to the base of the posterior tonsillar pillar.³

After this block has been accomplished, 2 to 3 ml cocaine hydrochloride 4% is dripped into the hypopharyngeal region. So the surgeon can see this area, the patient is asked to hold his tongue out with one hand while the surgeon uses a laryngeal mirror and the Lukens syringe.

Anesthesia at the TE puncture site is achieved with topical application of 4% cocaine and infiltration of 2% lidocaine.

Anesthesia of the nose is achieved by placing several drops of 4% cocaine into each nostril.

Operative Technique

Our operative technique is identical to that described by Singer and Blom in their original paper.

Case Material

All patients were male VA patients. Of the seven patients selected thus far, six were surgical successes, i.e., they were able to shunt air into the esophagus and produce sound after the prosthesis was placed. Three of these have progressed to having good speech using their prosthesis and three have discontinued using the prosthesis. The one surgical failure had a crycopharyngeal stricture which would not permit passage of the esophagoscope. This abnormality failed to show on preoperative esophogram. Of the three successful patients, two required having their TE fistulas dilated after the prosthesis had been left out for an extended period.

Three surgical successes are no longer using their prostheses. One patient was repelled by the mucus that collected in and around the prosthesis and refused to touch and care for it. A second patient was very concerned about the care of the prosthesis and lacked faith in the ability of the prosthesis to provide him with adequate speech. This patient had prior esophageal speech and could not break his habit of injecting air for esophageal speech, which interfered with the use of the prosthesis.

Discussion

We agree with Singer and Blom that the TE puncture and valved voice prosthesis provides a simple method for voice restoration. Our results show that local anesthesia is a suitable option to the general anesthesia proposed by Singer.

Although Blom and Singer define success as the production of intelligible and fluent speech,

we would like to define success as first, surgical and then, vocal. Surgical success is the ability to make sound by occluding the stoma. Vocal success is the production of intelligible and fluent speech.

Of our seven patients, there were six surgical successes, three vocal successes and three vocal failures. There was one surgical failure due to a hypopharyngeal stricture not noted on preoperative esophogram. In subsequent patients we began to use bougies as part of our preoperative screen to assure adequate hypopharyngeal and esophageal lumen size.

Of particular interest to otolaryngologists contemplating this procedure for any of their patients is the category of surgical success and vocal failure. We feel these vocal failures could have been eliminated with more careful preoperative screening by the surgeon and speech pathologist.

It is imperative that the patient be highly motivated and able to learn to manage placement of his own prosthesis. Furthermore, he must have enough manual dexterity to routinely occlude his stoma and clean and replace the prosthesis as necessary.

One of the three had a stoma that was too large and deep to easily accept the Blom-Singer prosthesis. Our feeling is that this patient could have been a vocal success if he had been properly motivated.

The remaining two vocal failures postopera-

tively were poorly motivated and probably should not have been selected initially. We feel that lack of motivation is an inherent problem with many older head and neck cancer patients, but these can usually be screened out by proper preoperative evaluation.

None of the vocal or surgical failures can be attributed to the use of local anesthesia. All six of the surgical successes were able to shunt air through the prosthesis postoperatively and produce sound.

Summary

Clearly local anesthesia is a viable alternative to general anesthesia for placement of the Blom-Singer voice prosthesis. Preoperative evaluation, however, must be thorough to achieve a high surgical and vocal success rate regardless of anesthetic technique. 

Acknowledgment:

The authors wish to thank Dr. Francisco G. Moreno for his assistance in the preparation of this manuscript.

REFERENCES

1. Singer MI, Blom ED: An endoscopic technique for restoration of voice after laryngectomy. Presented at the annual meeting of the American Laryngologic Association, Palm Beach, Fla, April, 1980.
2. Norris CM: Endoscopy and mediastinoscopy, in Paparella MM, Shumrick DA (eds): *Otolaryngology*. Philadelphia, WB Saunders Co, 1980, pp 2590-2591.
3. Bridenbaugh PO: Anesthesia, in Paparella MM, Shumrick DA (eds): *Otolaryngology*. Philadelphia, WB Saunders Co, 1980, p 847.

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The Impact of a Tertiary Perinatal Center on Survival of the Very Low Birth Weight Infant

ALLEN P. KILLAM, M.D.; JEFFREY M. BARRETT, M.D.; and ROBERT B. COTTON, M.D.

Introduction

Perinatal survival rates have improved during the past 20 years as a result of a number of factors. The controversy surrounding routine electronic fetal heart rate monitoring illustrates the difficulty of evaluating the impact of any single factor on perinatal survival rates, morbidity, and the cost of medical care.¹ During the past six years, there was an abrupt and dramatic increase in the survival of infants who weighed less than 1,000 gm and were delivered at a tertiary care center. Over the same period, the survival rates of infants of similar birth weight did not increase significantly if they were born at another hospital and later transported to the tertiary center. The survival rates of the heavier premature did not increase significantly, whether or not they were delivered at the tertiary center.

Method

The number of admissions and survival rates was tabulated in increments for newborn birth weights between 500 and 2,000 gm for admissions to the neonatal intensive care unit (NICU) at Vanderbilt University Medical Center during two periods of time (1975 and 1976 compared with 1979 and 1980) (Table 1). Survival rates were expressed as the percentage surviving until discharge from the NICU. No correction was made for congenital anomalies or any other factor, and all admissions are included in the statistics. All live-born infants who were delivered at Vanderbilt University Medical Center and admitted to the NICU were included in the category of inborn infants. Those infants delivered at another hospital and then transferred to the NICU at

Vanderbilt were designated outborn infants. Infants who died during transport to Vanderbilt were not included in this study. Statistical analysis was done by chi-square tests.

Results

Survival statistics for infants weighing 501 to 1,000 gm are shown in Table 1. The overall survival rate of premature infants weighing 501 to 1,000 gm in 1975 and 1976 was 30% in the inborn group and 36.5% in the outborn group. There was no significant difference in the survival rate between inborn and outborn infants during this period of time. During 1979 and 1980 the survival of inborn infants increased significantly from 30% to 67% ($P < .001$) but the survival of outborn infants was unchanged (36.5% in 1975 and 1976, and 38% in 1979 and 1980) resulting in a significant difference in the survival rates of inborn and outborn infants in 1979-1980 (67% inborn vs 38% outborn, $P < .001$).

Survival statistics for infants weighing 1,001 to 1,500 gm are shown in Table 2. The overall survival rates for those babies who weighed 1,001 to 1,500 gm and were born during 1975 and 1976 were 80% for inborns and 81% for outborns. During 1979 and 1980 the survival rate was 85% for inborn infants and 79% for outborn infants, indicating no significant increase in the survival of larger infants born during the later time frame, whether or not they were inborn or outborn.

Survival statistics for infants weighing 1,501 to 2,000 gm are shown in Table 3. The survival rates for infants weighing between 1,501 and 2,000 gm show no significant improvement between 1975-1976 and 1979-1980 for either those born in the tertiary care center or those born outside the center.

Discussion

The survival rate of premature infants admitted to the NICU at Vanderbilt University Medical Center weighing over 1,000 gm has remained

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TABLE 1

SURVIVAL OF NEONATES WEIGHING 501 TO 1,000 GRAMS IN 1975-1976 VS 1979-1980

Birth Weight Range	Inborn (Number Survived/Admission)		Outborn (Number Survived/Admission)	
	1975-1976	1979-1980	1975-1976	1979-1980
501-750 gm	0/5=0%	11/23=48%	2/10=20%	2/17=12%
751-1,000 gm	7/18=39%	42/55=76%	21/53=40%	25/55=45%
TOTAL 501-1,000 gm	7/23=30%	53/78=67%	23/63=36.5%	27/72=38%

TABLE 2

SURVIVAL OF NEONATES WEIGHING 1,001 TO 1,500 GRAMS IN 1975-1976 VS 1979-1980

Birth Weight Range	Inborn (Number Survived/Admission)		Outborn (Number Survived/Admission)	
	1975-1976	1979-1980	1975-1976	1979-1980
1,001-1,250 gm	12/19=63%	51/65=78%	59/72=82%	26/39=67%
1,251-1,500 gm	28/31=90%	77/86=90%	49/61=80%	51/59=86%
TOTAL 1,001-1,500 gm	40/50=80%	128/151=85%	108/133=81%	77/98=79%

TABLE 3

SURVIVAL OF NEONATES WEIGHING 1,501 TO 2,000 GRAMS IN 1975-1976 VS 1979-1980

Birth Weight Range	Inborn (Number Survived/Admission)		Outborn (Number Survived/Admission)	
	1975-1976	1979-1980	1975-1976	1979-1980
TOTAL 1,501-2,000 gm	52/56=93%	183/191=96%	121/142=85%	135/151=90%

relatively stable over the past six years; however, there has been a dramatic increase in the number and survival rates of infants who weighed less than 1,000 gm and were born at Vanderbilt University Medical Center. During the same period, there has been no significant improvement in the survival rate of babies weighing less than 1,000 gm when born outside of the hospital and then transported to the tertiary center.

A major topic for discussion is the reasons why there was an apparently significant increase in the survival of inborn infants, but not for outborn infants weighing less than 1,000 gm at birth. We are forced to speculate that several factors were involved, and we are unable to state which factor was most responsible for the in-

crease in survival. A change in attitude in the obstetric team originating from the belief that survival is a realistic possibility may have resulted in more aggressive attempts to reduce intrapartum stress. These attempts included care in delivering oxytocin, administering oxygen to the mother, positioning her on her side, reassuring her, carefully applying analgesia, sedation and anesthesia, and selectively expediting delivery by abdominal or vaginal route.²

Another major factor in the increased survival of the inborn very low birth weight infant may be the close proximity of the delivery room to the neonatal intensive care unit, where experienced personnel skilled in the care of the critically ill newborn infant are available for resuscitation and

PERINATAL CARE AND SURVIVAL/Killam

stabilization of the patient immediately after birth. These very low birth weight infants are more susceptible to cold stress, hypoxia and other stresses involved in transporting them between hospitals. Close communication between the obstetric team and the neonatal team may result in more appropriate care for the fragile, very low birth weight infant.

Although our data imply that the fetus who would benefit most from the delivery at a tertiary perinatal center is the one who is at risk of delivering when it weighs between 600 and 1,000 gm, resistance to the transfer of mothers to a tertiary perinatal center prior to delivery of a baby who is thought to weigh less than 1,000 gm has continued for several reasons. In many cases fetal weight or gestational age is misjudged. Often there is no time to transfer the mother after she reports to the outlying hospital or to her doctor's office because of the distance or her advanced stage of labor. In other cases, the decision not to transfer the mother prior to delivery of a very low birth weight infant is deliberate and based on the assumption that the chance for survival is too low and the chance for morbidity is too high to justify the effort and expense involved. The survival statistics for inborn babies reported in this and other papers clearly demonstrate a reasonable chance for survival exists even if a newborn weighs between 600 and 1,000 gm at birth.^{2,3} Therefore more realistic concerns might be directed at the incidence of long-term morbidity and the costs of medical care for these infants.^{4,6} The average cost for surviving infants weighing less than 1,000 gm at birth during the initial admission to the NICU Vanderbilt was \$33,019 per infant in 1980. Sufficient follow-up data are not yet available to allow us to quote precise statistics about long-term morbidity and eventual outcome in the very low birth weight infants.

In the past, as the survival of premature infants increased, the percentage or the number of handicapped children did not increase. Intensive care of the sick newborn has, by and large, lowered the morbidity in the survivors, but whether this trend will hold for this new population of very low birth weight survivors has not been established. We did not intend to discuss the ethical considerations, per se, of the decision to provide intensive or tertiary care for the fetus and newborn infant in this very low birth weight category. Individual cases must be discussed between

the parents and the health care providers, taking into account the improving survival rates reported here.

The fact that outborn infants weighing more than 1,000 gm survive at rates similar to those of inborn infants of similar weight categories should not discourage maternal transport when indicated by the presence of a clear-cut risk factor. The capacity of the referring hospital to deal effectively with the "worst case" possibilities, such as unexpected asphyxia and actual birth weight of 500 gm under what would be expected, should be considered when managing the high-risk pregnancy. Antenatal estimates of fetal weight and gestational age are notoriously inaccurate. The prediction of eventual fetal condition during the later phases of labor are often too optimistic when made early in labor, and maternal considerations such as hemorrhage, hypertension, or other severe illnesses could be valid reasons for transferring the mother prior to delivery.

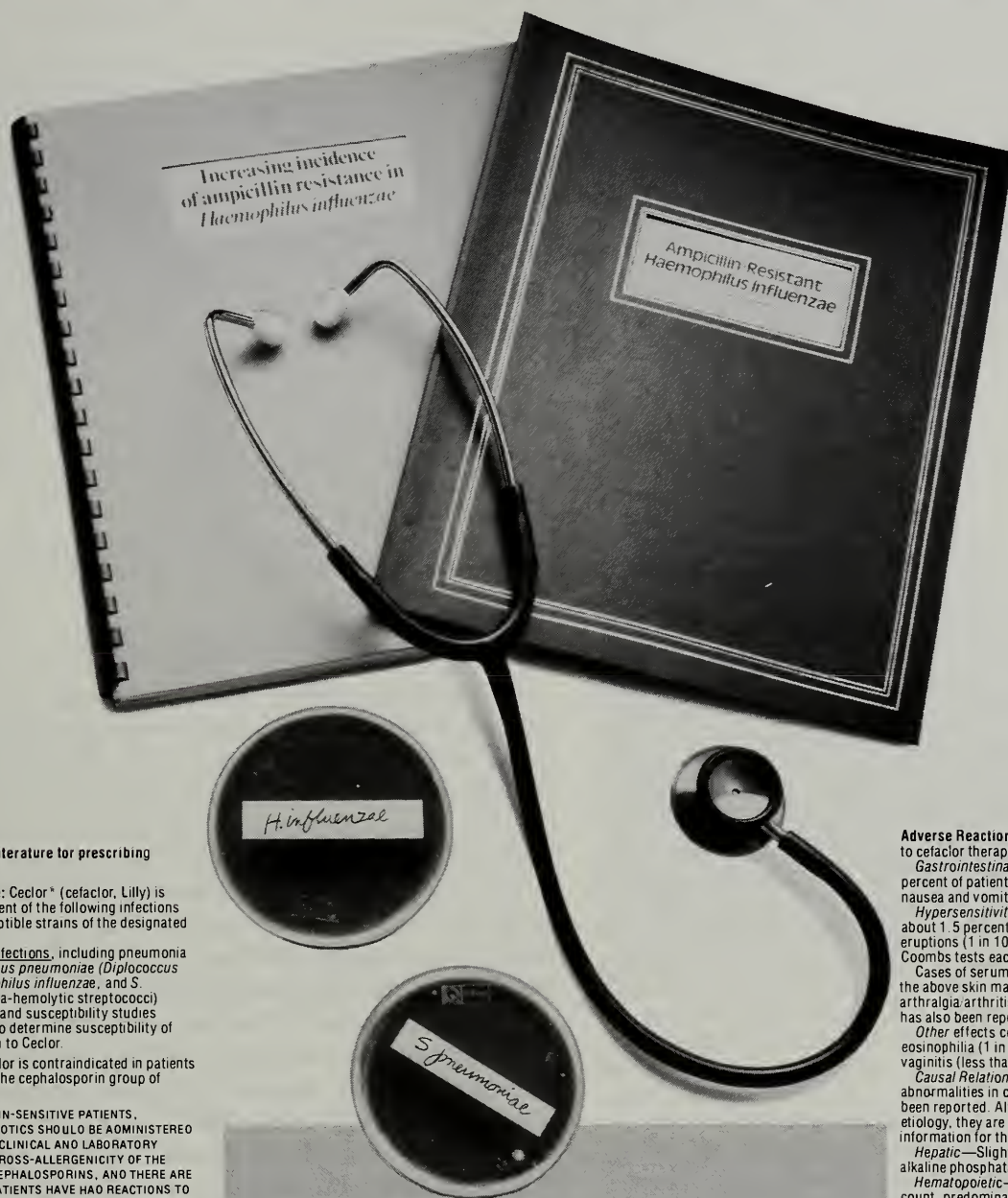
Conclusion and Summary

There was a significant increase in the survival rate of newborn infants with a birth weight of less than 1,000 gm if they were born at a regional perinatal center during the years 1979 and 1980 compared with the survival rate in the same birth weight categories during 1975 and 1976. The survival rates of similar infants born at other hospitals and subsequently admitted to the NICU of the regional center did not increase between 1975-1976 and 1979-1980. Survival rates of premature newborns weighing over 1,000 gm remained relatively stable whether or not they were inborn or outborn. These results illustrate the potential benefit of having the very low birth weight infant delivered following perinatal management at a regional center. An explanation of the potential cost and long-term morbidity should be given to parents regardless of where the baby is delivered.

REFERENCES

1. Neutra R, Feinberg S, Greenland S, et al: Effect of fetal monitoring on neonatal death rate. *N Engl J Med* 299:324, 1978.
2. Bowes W Jr: Delivery of the very low birth weight infant. *Clin Perinatol* 8:183, 1981.
3. Hack M, Fanaroff AA, Merkatz IR: The low-birth weight infant—evolution of a changing outlook. *N Engl J Med* 301:1162, 1979.
4. Kumar S, Anday E, Sacks L, et al: Survival of the extremely low birth weight infant—current limits of successful support. *Pediatr Res* 14:602, 1980.
5. Kitchen W, Rickards A, Ryan M, et al: A longitudinal study of very low birth weight infants. II: Results of controlled trial of intensive care and incidence of handicaps. *Develop Med Child Neurol* 21:582, 1979.
6. Jones R, Cummins M, Davies P: Infants of very low birth weight. *Lancet* 1:1332, 1979.

An added complication... in the treatment of bacterial bronchitis*



Brief Summary
Consult the package literature for prescribing information.

Indications and Usage: Ceclor® (cefactor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae* (Diplococcus pneumoniae), *Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS TO BOTH DRUG CLASSES (INCLUDING ANAPHYLAXIS AFTER PARENTERAL USE).

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Precautions: If an allergic reaction to cefactor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of cefactor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug.

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinistest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Usage in Pregnancy: Although no teratogenic or antifertility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established. The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus.

Usage in Infancy: Safety of this product for use in infants less than one month of age has not been established.

Some ampicillin-resistant strains of *Haemophilus influenzae*—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Ceclor.¹⁻⁶

In clinical trials, patients with bacterial bronchitis due to susceptible strains of *Streptococcus pneumoniae*, *H. influenzae*, *S. pyogenes* (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Ceclor.⁷

Ceclor®

cefactor

Pulvules®, 250 and 500 mg

Adverse Reactions: Adverse effects considered related to cefactor therapy are uncommon and are listed below:

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70) and nausea and vomiting (1 in 90).

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs tests each occur in less than 1 in 200 patients.

Cases of serum-sickness-like reactions, including the above skin manifestations, fever, and arthralgia/arthritis, have been reported. Anaphylaxis has also been reported.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

[103080R]

*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H. influenzae*.⁸

Note: Ceclor® (cefactor) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

References

1. Antimicrob. Agents Chemother., 8: 91, 1975.
2. Antimicrob. Agents Chemother., 11: 470, 1977.
3. Antimicrob. Agents Chemother., 13: 584, 1978.
4. Antimicrob. Agents Chemother., 12: 490, 1977.
5. Current Chemotherapy (edited by W. Siegenthaler and R. Luthy), II: 880. Washington, D.C.: American Society for Microbiology, 1978.
6. Antimicrob. Agents Chemother., 13: 861, 1978.
7. Data on file, Eli Lilly and Company.
8. Principles and Practice of Infectious Diseases (edited by G. L. Mandell, R. G. Douglas, Jr., and J. E. Bennett), p. 487. New York: John Wiley & Sons, 1979.



Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285.
Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630

100061

Cutaneous Larva Migrans

CHARLES E. KOSSMANN, M.D., Editor

JAMES DALE, M.D.:

A 49-year-old white man was healthy until ten days before admission. While working on moist soil under a disabled trailer he noticed intense pruritus of the body surface areas in contact with the ground, but he continued his work, and shortly after its completion noted a rash over his left thigh and shoulder. Two days later he began to experience wheezing and shortness of breath, and went to the emergency room of a local hospital where he received symptomatic treatment of an unknown type with good relief. Nevertheless, on several consecutive days wheezing recurred, for which he again received treatment, and a week after the onset of his complaints, he was referred to the Blytheville Air Force Base Hospital for continued wheezing. He was admitted and treated aggressively with bronchodilators and intravenous steroids, but it was noted that he was producing copious amounts of yellowish sputum and had developed a serpiginous erythematous rash over his left thigh and shoulder which continued to itch intensely. He was transferred to the Memphis Veterans Administration Medical Center on the tenth day of illness for further evaluation.

Rectal temperature was 98.5 F, the pulse rate was 110 beats per minute, respirations 24/min, and blood pressure 160/80 mm Hg. He was well nourished and in moderate respiratory distress. The pulse was paradoxical and rapid, but the cardiovascular examination was otherwise normal. Diffuse inspiratory and expiratory wheezes were heard in the lungs. The skin over the left shoulder, arm, thigh, and both buttocks displayed a papulovesicular rash with serpiginous erythematous streaks (Fig. 1).

On 4 liters of oxygen, the blood pH was 7.37, P_{O_2} 109 mm Hg, and P_{CO_2} 46 mm Hg. The white blood cell count was 11,900/cu mm with 81% segmented neutrophils, 9% lymphocytes, 6% mononuclear cells, and 4% eosinophils. The hematocrit was 49%. Blood electrolytes, urinalysis, and thoracic roentgenograms were normal. Several stool examinations for parasites were negative. The sputum was positive for filariform larvae not otherwise identified (Fig. 2).

His hospital course was uncomplicated. The bronchial asthma was treated with intravenous and oral aminophylline, inhaled β -adrenergic agonists, and steroids. The larval

infection was treated with oral thiabendazole, 1.5 gm every 12 hours for four doses.

The respiratory and dermatologic symptoms gradually improved over the subsequent three days, and three days after the last dose of thiabendazole the rash, cough, and wheezing subsided completely. He was discharged from the hospital on bronchodilators and decreasing doses of steroids.

GORDON D. CHRISTENSEN, M.D.:

This patient presents an unusual manifestation of a common clinical condition caused by parasites and known as cutaneous larva migrans, or creeping eruption.^{1,2} This case allows us to discuss a number of cutaneous as well as visceral migratory helminthic infections that are common to the southeastern United States, and therefore of interest to physicians in this area. In two of them, the human hookworm (*Ancylostoma duodenale*) and threadworm (*Strongyloides stercoralis*), man is the definitive host. Three additional infections—dog and cat hookworms (*A. braziliense* and *A. caninum*), dog and cat roundworms (*Toxocara canis* and *cati*), and dog heartworms (*Dirofilaria immitis*)—are particularly interesting because they are normally diseases of domestic animals; man is an aberrant or accidental host (Table 1). It will be pointed out that the three latter diseases are rather remarkable in that, as opposed to the first two, there is often a more intense human host reaction to the parasite. The life cycle of the parasite is incomplete in the aberrant human host.

All five of the parasites under discussion are nematodes (roundworms) as opposed to cestodes (tapeworms) or trematodes (flukes).

General

The most common cause of cutaneous larva migrans is *A. braziliense* (both dog and cat hookworm)¹⁻³ which we believe was the particu-

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Presented July 15, 1981.

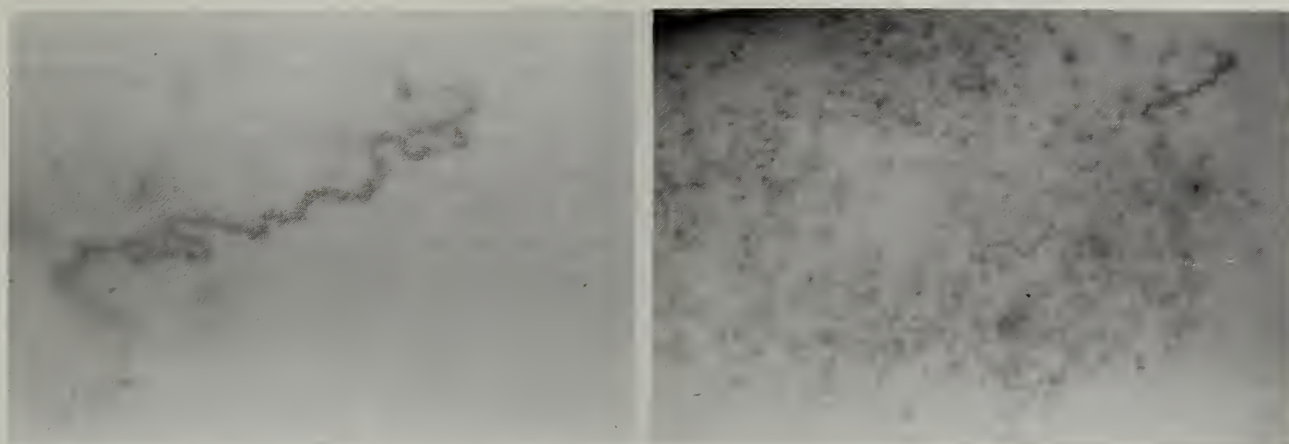


Figure 1. The left photograph is a close-up of the patient's thigh showing the characteristic serpiginous track of cutaneous larva migrans. The right photograph is a larger view demonstrating the patient's papulovesicular and serpiginous eruption.

lar parasite in the patient presented today. It produces a threadlike, pruritic burrow in the skin which lasts for months and moves characteristically at a rate of 1 to 2 cm per day.¹ Another animal hookworm, *A. caninum* (dog hookworm), also occasionally produces a creeping eruption. With this latter organism the cutaneous lesion usually lasts for a shorter period of time and rarely produces the linear tracks of *A. braziliense*.⁴

Human hookworm (*A. duodenale*) may also cause a rash similar to cutaneous larva migrans. Generally the rash is vesicular but occasionally it displays some short streaks, and is of a much shorter duration, about two weeks.⁴

Human threadworm (*S. stercoralis*) may produce serpiginous tracks across the skin. Threadworm migrates rapidly, and hence is called larva currens.⁴ There is a case report of a patient who observed the worm making a track across his entire abdomen in less than a day,⁴ as opposed to the daily rate of 1 or 2 cm for *A. braziliense*.

Visceral larva migrans (toxocariasis, or dog and cat roundworm) and dirofilariasis (dog heartworm) do not cause creeping eruption but are migratory helminthic infections indigenous to the southeastern United States.

Animal Hookworm (*A. braziliense* and *caninum*)

Life Cycle:

The life cycle for the hookworms of cats, dogs, and humans is the same. The disease begins with an infective filariform larva in ground contaminated with feces of the infected host. In-

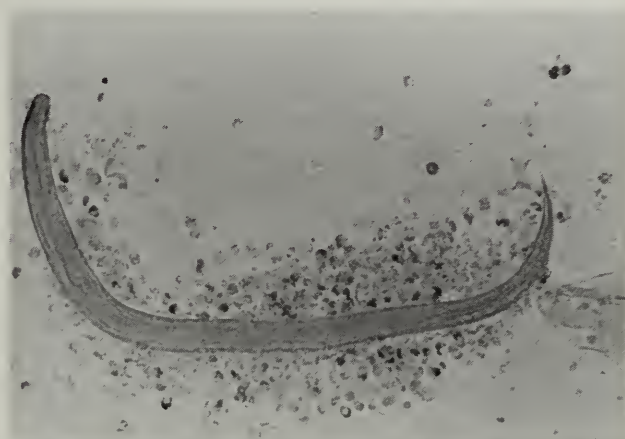


Figure 2. This micrograph is one of the filariform larvae with attached leukocytes found in the patient's sputum.

fection begins with penetration of the skin of the animal's foot pads or human's foot followed by migration through the dermal blood vessels into the systemic venous system. The parasite passes through the right side of the heart into the pulmonary circulation where the organism lodges in the small capillaries of the lungs. It penetrates these capillaries, enters the alveoli, and is escalated past the upper glottis where it is swallowed. Descending by way of the esophagus and stomach, it reaches its final location in the small intestine, where the larva develops into the adult stage.

When the human is the aberrant or accidental host, the larva may penetrate the skin but is unable to penetrate the dermis, causing it to burrow aimlessly through the epidermis and producing the characteristic creeping eruption¹ (Fig. 1). Un-

TABLE 1

CUTANEOUS AND VISCERAL MIGRATORY HELMINTHS
COMMON TO THE SOUTHEAST UNITED STATES

Human hookworm (<i>Ancylostoma duodenale</i>)
Human threadworm (<i>Strongyloides stercoralis</i>)
Dog and cat hookworm (<i>Ancylostoma caninum</i> and <i>braziliense</i>)
Dog and cat roundworm (<i>Toxocara canis</i> and <i>cati</i>)
Dog heartworm (<i>Dirofilaria immitis</i>)

able to complete its life cycle, the worm eventually dies.

Epidemiology:

As noted earlier, cutaneous larva migrans is indigenous to the southeastern United States.³ It has been recognized for over 100 years^{2,3} and reported from up and down the Atlantic seaboard, along the Gulf Coast, in Mexico, South America, tropical Africa, India, and Southeast Asia. The larvae thrive in moist, sandy, shaded soil and are killed by frost. The parasites are found where animals frequently defecate, as underneath houses.³ It is a particular problem in the South, where we have so few basements. The larvae are also found in sandboxes, along beaches, and in gardens.^{1,2} It is an occupational disease of plumbers and electricians who lie on the ground while working underneath houses.² Children, swimmers, beachcombers, and gardeners are also frequently infected.² Our patient fits this pattern very nicely because he was lying on obviously infected ground while working on the underside of a trailer.

Manifestations:

Patients give a history of tingling immediately after skin contact with infected earth. One or two days later a papular eruption develops followed by serpiginous skin tracks which, as noted, progress at a rate of 1 to 2 cm per day. The tracks are usually found on the hands, feet, or buttocks but may occur on any body surface that has been in contact with the ground. On rare occasions the parasite succeeds in migrating into the systemic venous circulation producing pulmonary infiltrates.¹ The patient may experience a mild hypersensitivity reaction (Loeffler's syndrome),^{1,5} or rarely an asthmatic reaction² as in today's case.

Very rarely (I know of only a single case report²), the larva is actually isolated from the sputum as it was in our patient (Fig. 2). There is occasional mention of finding adult worms in the bowel indicating that completion of the life cycle may take place in man.²

Eosinophilia is variable and is usually a late manifestation.⁵ There may be a transient increase in serum IgE.¹

Diagnosis and Therapy:

The diagnosis is made simply by the appearance of the eruption. Biopsy of the leading edge of the burrow may demonstrate the worm. Sputums should be examined for filariform larvae in patients with pulmonary symptoms.

Before the availability of thiabendazole, the therapy was simply to spray a freezing agent on the skin, producing a small bulla and releasing the parasite.³

Thiabendazole may be applied to the skin as a lotion or prescribed systemically when indicated as in the present case.¹ Prevention of the disease is achieved primarily by covering potentially infective soil with plastic sheeting. The filariform larvae are capable of penetrating clothing, as they did in our case. In a fashion similar to agricultural control of nematodes, infective soil may be treated with larvacides. Finally, animal control is crucial to prevention.³

Human Hookworm (*A. duodenale*)

In human hookworm, in which man is the definitive host, the pruritis caused by the penetration through the skin of the infective larvae is called ground itch or dew itch. This is a much milder condition than cutaneous larva migrans, where man is the accidental host.

Epidemiology:

The epidemiology is similar to other tropical and subtropical diseases because the infective larvae are killed by cold weather. Its spread requires human defecation on the ground. It is an occupational disease of field workers who walk, often barefooted, in regularly tilled, loose soil. It was formerly quite common throughout the southeastern United States and still may be found in some rural areas.⁶

Manifestations:

The manifestations are a papular, pruritic skin rash which is less marked than cutaneous larva migrans and rarely has short serpiginous tracks.

A transient pneumonitis is common as the organism migrates through the lungs. Further visceral migration is unusual and rarely are there any abdominal complaints. Very late in the disease, because of continuous ingestion of blood by the adult intestinal larva, the patient may develop a microcytic hypochromic anemia. With heavy infestations and severe anemia there may be exertional dyspnea, weakness, and occasionally heart failure. Death is very unusual in either human or animal hookworm diseases.⁷

Diagnosis and Therapy:

Diagnosis is made by demonstrating hookworm eggs in the feces. The therapy is mebendazole, not thiabendazole.

Threadworm (*S. stercoralis*)

Infection with *S. stercoralis* must be considered in the differential diagnosis of creeping eruption, since the parasite may produce a similar clinical entity, larva currens.⁴ Larva currens is characterized by very rapid dermal migration as opposed to the slower migration of larva migrans.

Life Cycle:

Similar to the hookworm infestations, the disease begins with penetration by filariform larvae of skin on contact with infective ground. The larvae enter the systemic venous system and migrate to the lungs, where they penetrate the alveoli, are swept up into the throat, and are swallowed into the gastrointestinal tract and enter the adult stage. At this point several events may take place. Usually the worms mature, invade the submucosa, produce eggs, and release them into the feces. The eggs release rhabditiform (non-infective) larvae which then pass by way of the feces into the ground. As opposed to hookworms, the organisms may complete their life cycle in the soil and continue to perpetuate themselves there independent of the definitive host. It appears, however, that a host is occasionally necessary to restore the parasite's vitality. If there is smearing of the feces on the host's skin, the external rhabditiform larva may develop into a filariform (thread-like) larva, re-penetrate the host's cutaneous tissues, and produce a skin rash (larva currens) and auto-infection.^{8,9}

Hyperinfection:

In an occasional patient, particularly those with deficient cell-mediated immunity, there is a

departure from the normal host-parasite relationship, and "hyperinfection" develops.⁸⁻¹⁰ This is particularly important in the City of Memphis Hospital because of the large number of patients at risk for this complication. In immunodeficient patients, the rhabditiform larvae are able to mature more rapidly and produce infective microfilariform larvae before they are defecated. The microfilariae penetrate the intestinal wall and complete their life cycle. The rapid cycle of auto-infection results in hyperinfection,⁸⁻¹⁰ in which tremendous numbers of organisms entering the lung produce large pneumonic infiltrates. These pneumonic larvae may pass through to the systemic arterial circulation with dissemination throughout the body and produce metastatic lesions of multiple organs, including the brain.⁹ The overwhelming parasitic load also exposes the host to frequent Gram-negative sepsis. The disease is frequently fatal and very difficult to diagnose.

Epidemiology:

About 1% to 4% of the population are affected with the disease,⁸ which is particularly common in institutions for the mentally retarded and is more common in adults than in children, as opposed to many of the other parasitic diseases.⁸

Manifestations:

Strongyloidiasis is often asymptomatic. Symptoms, when they occur, may include watery diarrhea, a skin rash, transient pneumonitis, and abdominal pain. Less often, as a consequence of worm-induced enteropathy, there is protein malabsorption.⁸ Eosinophilia is quite variable,⁸ patients with small infestations often showing none, while in patients with severe infestations the eosinophilia may be quite high, though patients with hyperinfection may not have eosinophilia.

Diagnosis and Therapy:

The demonstration of larvae in the stool makes the diagnosis, but a quarter of the stool samples will be falsely negative. If the disease is suspected and the stool is negative, the larvae may be found in duodenal fluid or gastric washings. Occasionally larvae are found in the urine or sputum.

The therapy is thiabendazole.

The following two parasitic diseases are included in this discussion because of their significant visceral rather than cutaneous migration.

Animal Roundworms (*T. canis* and *cati*)

T. canis and *cati* commonly infest dogs and cats, respectively, in the southeast. They may be transmitted to humans and produce the clinical entity visceral larva migrans. They are important because they are two of the parasitic diseases that could be controlled by better control of pets.

Life Cycle:

I will talk primarily about *T. canis* in the dog, which is the major cause of human toxocariasis. The life cycle begins with infective eggs ingested by the adult animal; they develop into larvae in the intestines. As in the hookworm diseases, the larvae enter the circulatory system, but are disseminated throughout the animal's body instead of lodging specifically in the lungs. In most animals the disease ends here, but if the dog is a female and becomes pregnant, the hormonal modifications of pregnancy stimulate the larvae to remigrate across the placenta and into the fetal pups' lungs.¹¹ From there they penetrate the alveoli, are swallowed, and lodge in the small intestine. Thus, puppies are the major source of the adult worm. It is estimated that 80% of puppies are afflicted with *Toxocara*.¹¹ As the puppy grows older, it develops an immunity to the worm and the infestation is overcome, but the temporary presence of the worm allows the puppy to spread the organism by way of the feces. If these are ingested, usually by a child but occasionally by an adult, the human may become the aberrant host. Larvae develop, enter the portal circulation, follow it to the liver and then to the lungs, where they enter the systemic circulation and are distributed to other bodily organs. If impeded by small vessel size, they will bore through to the tissue and eventually die without further maturation. Illness is produced by the inflammatory reaction to the worms' presence and mechanical disruption by the worm of parenchymal and vascular tissues.^{7,11}

Epidemiology:

Dirt eating (pica) in children is the major way humans acquire the disease.¹¹ As noted, almost all puppies have toxocariasis, and from 10% to 30% of soil samples in public places are contaminated with the eggs of this organism.¹¹ Since the parasite is killed by cold weather, the disease is encountered in the southeast where there is year-round warm, moist ground.¹¹

Manifestations:

There is a high incidence of asymptomatic disease, but symptoms, when present, include fever, cough, wheezing, malaise, and irritability. Less often there is nausea, vomiting, skin rash, abdominal pain, and central nervous system abnormalities.^{7,11} Many believe that *Toxocara* is the primary cause of epilepsy in children. Unilateral endophthalmitis is a late manifestation, and may be mistaken for retinoblastoma, especially if other evidence of the parasitic infection has subsided.¹¹

Signs are weight loss, hepatomegaly, pulmonary infiltrates, and less often, splenomegaly and lymphadenopathy.^{7,11} Eosinophilia, leukocytosis, and increased immunoglobulins occur. Particularly interesting is the finding of eosinophils in the cerebrospinal fluid with central nervous system involvement.

Diagnosis and Therapy:

The diagnosis is serologic.^{7,11} It is very difficult to obtain a tissue diagnosis in these patients unless fairly large samples are obtained.^{7,11}

The therapy is with steroids because it is the reaction to this organism rather than the organism itself that produces the disease.¹¹ However, anthelmintic compounds, particularly thiabendazole and also diethylcarbamazine, have been suggested as definitive helminthocidal therapy.

Prevention:

Prevention is by worming pets, particularly puppies, in the first six weeks to six months of life, and curbing indiscriminate defecation by household pets.

Dog Heartworm (*D. immitis*)

The South is also an endemic area for dog heartworms, which may occasionally be transmitted to humans. The adult heartworm in the dog releases into the blood microfilariae which are ingested by mosquitoes, and in turn are transmitted to other dogs. The worm completes its life cycle as an adult in the dog's right ventricle. Most microfilariae accidentally transmitted by mosquitoes to humans are killed, but very rarely, a microfilaria will partially mature to an infertile adult, embolize to the lung, and produce an isolated pulmonary nodule.^{7,12}

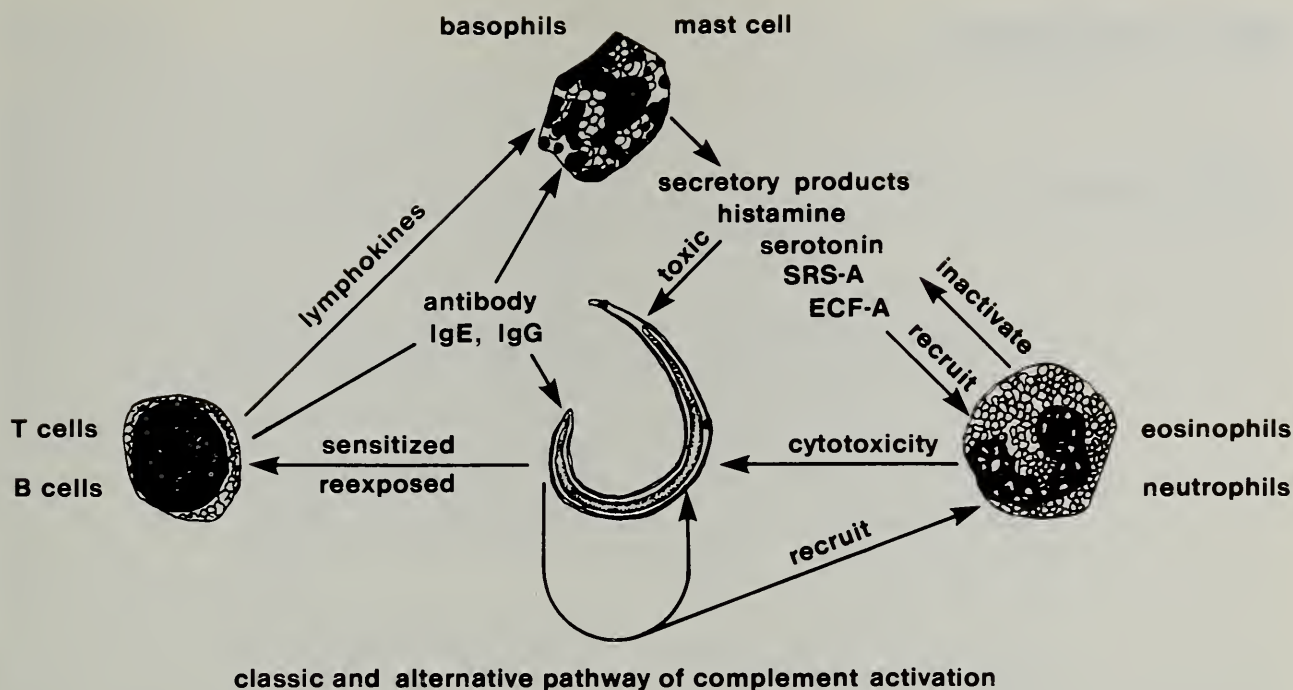


Figure 3. A generalized schema of the humoral and cellular immunologic reactions to tissue helminths.

The Immunology of the Parasites Involved in Cutaneous Larva Migrans

Characteristically the allergic manifestations are not as severe in parasitic diseases in which the human is the definitive host as in those where the human is the accidental host. There is an explanation for this difference. The successful parasite in a definitive host depends upon its ability to evade the host's immune system and minimally disturb organ functions in order to insure completion of its life cycle and establish the next generation of parasites. On the other hand, the parasite is not adapted to an aberrant host, so that the immune reaction is likely to be greater.

The immunity to a worm begins after it has had some contact with human lymphocytes and sensitized them (Fig. 3). Lymphokines, produced by the sensitized lymphocytes on reexposure or continued exposure to the worm, recruit and activate basophils and mast cells, referred to as the basophilic cutaneous hypersensitivity reaction. In addition, there is production of specific IgE and IgG antibodies to parasitic antigens. These immunoglobulins, particularly IgE, also recruit and stimulate basophils and mast cells, which in turn produce a number of secretory products including histamine, serotonin, slow reactive substance of anaphylaxis

(SRS-A), and eosinophil chemotactic factor (ECF).^{13,14} Some of these, such as histamine and serotonin, have direct toxic effects upon the worm and actually may kill it. Further, histamine stimulates peristalsis, which may move the worms more rapidly out of the bowel. These and other cellular secretions also recruit and stimulate eosinophils,¹⁵ which may in turn dampen the secretory response which attracts it.¹⁵ The first phase of the reaction to the parasite, then, is basophilic, the second eosinophilic.

The cellular secretory products may also recruit neutrophils.¹⁴ The parasite may stimulate the alternative and classic pathways of complement, activating C₃b on the worm's surface. The activation of complement further recruits and activates neutrophils and eosinophils,¹⁵ with the result that the worm and worm products are surrounded by an eosinophilic granulomatous reaction. The eosinophils and neutrophils bind to the surface of the worm by means of the specific IgE and IgG antibodies and activated complement.

Because of the size of the worm, phagocytosis is impossible, but it appears that eosinophils may elaborate major basic proteins which are cytotoxic to the parasite,¹⁵ and granulocytes may

(Continued on page 883)

EKG of the Month

W. BARTON CAMPBELL, M.D.

A 16-year-old girl was admitted to the St. Thomas Hospital emergency room with marked wheezing and a history of asthma treated with anhydrous theophylline (Theo-Dur) 200 mg orally twice daily and a metaproterenol sulfate (Alupent) inhaler four times daily. The day prior to admission she developed a sore throat and on the day of admission had marked increase in dyspnea, orthopnea, and wheezing. Examination disclosed an asthenic 59-lb acutely ill appearing black girl with a slight pectus excavatum. The pulse rate was 150/min and blood pressure 120/60 mm Hg. She was orthopneic, with a respiratory rate of 30/min and prominent wheezing rhonchi; no rales or murmurs were audible. An electrocardiogram was obtained (Fig. 1).

The electrocardiogram shows sinus rhythm with a rate of 123/min. The P-R interval is 0.15 seconds and the QRS complex has a normal duration of 0.08 seconds. The axis is moderately rightward at 120° . There is some variation in the axis and the QRS amplitude with respiration. In the first three beats in V_1 a prominent R' is present. The R' wave in the second and third beat have greater amplitude than the S wave. The T waves are inverted through V_3 . (Less pronounced inversion in V_2 is due to the superior orientation of the T wave.) The P waves are prominent in the inferior leads and have an amplitude of approximately 2.5 mm in lead II.

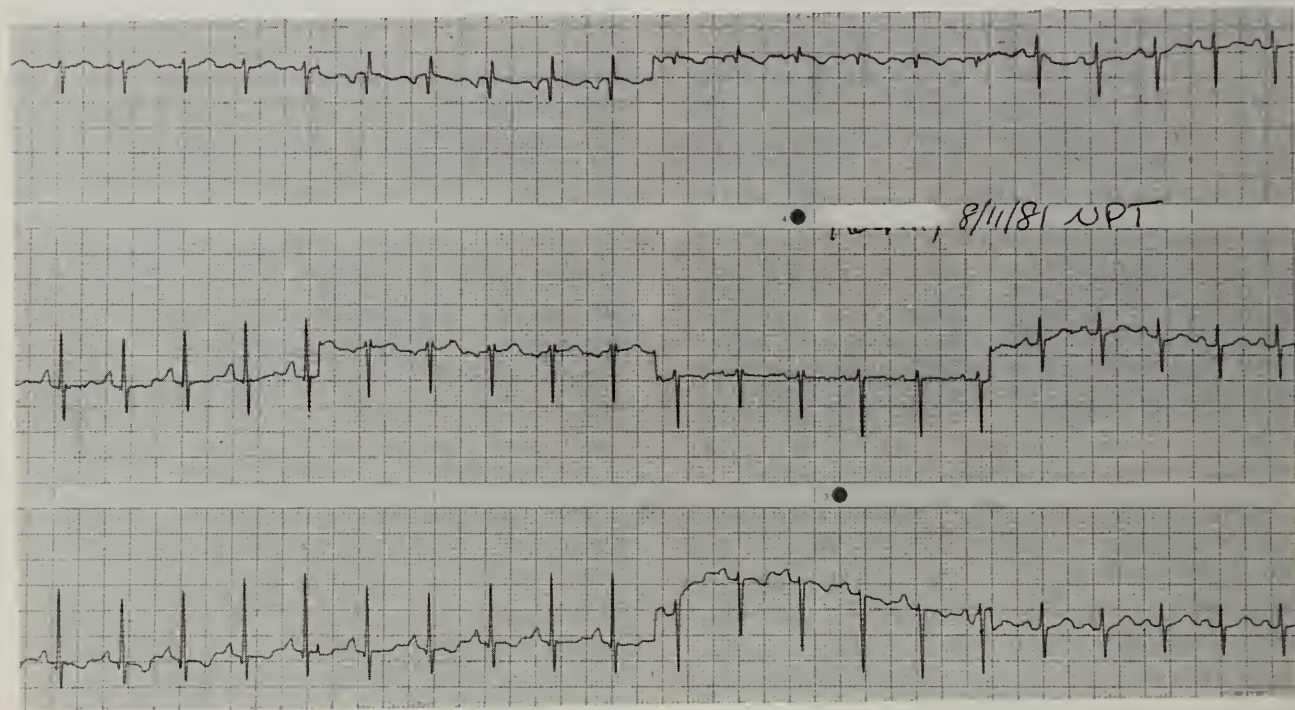


Figure 1

From the Department of Cardiology, St. Thomas Hospital, Box 380, Nashville, TN 37202.

Discussion

The finding of a P wave of 2.5 mm or more amplitude in lead II has been thought to be diagnostic of right atrial enlargement ("P pulmonale"). A further criterion was outlined by Macruz et al^{1,2} suggesting that if the duration of P wave/PR segment is < 1 right atrial enlargement is present. It has been well demonstrated that right atrial depolarization (which is responsible for inscribing the first portion of the P wave) is not significantly prolonged with right atrial enlargement.³ Although the above findings are usually associated with right atrial hypertrophy or increased right atrial pressures, they may be seen occasionally in the absence of either.⁴ Thus the diagnosis of right atrial enlargement lacks specificity.

Electrocardiographic signs of right ventricular enlargement were originally proposed by Sokolow,⁵ and more recently were reviewed by Flowers and Horan.⁶ Analysis of 18 criteria in 1,411 autopsied patients led to construction of a point score system which is reproduced in Table 1.⁷ Use of these criteria clearly substantiate the diagnosis of right ventricular enlargement in Fig. 1.

Clinical states which cause relatively rapid increase in pulmonary vascular resistances are often associated with transient electrocardiographic abnormalities. Pulmonary embolism is a well recognized cause of "acute cor pulmonale," but acute pulmonary edema or acute respiratory failure, especially when associated with bronchospasm, may be accompanied in some individuals by marked increase in pulmonary vascular resistances. Tachycardia is commonly seen in such a situation. Characteristic patterns of "acute cor pulmonale" include T wave inversion in the right precordial leads (the "juvenile T pattern" which is usually absent after age 12 years). The association of an S wave in lead I with a Q wave in lead III has also been classically associated with "acute cor pulmonale."⁸ It is my impression that the term "acute cor pulmonale" does not serve a useful diagnostic purpose. Obviously any situation that causes increased pulmonary vascular resistance might be expected to result in the electrocardiographic findings described above as suggestive of right ventricular enlargement or right atrial enlargement.

TABLE 1
POINT SCORE SYSTEM⁷

Sign	Points
1. R/S V ₅ / R/S V ₁ ≤ 0.4	5
2. qR in V ₁	5
3. R/S ratio in V ₁ > 1	4
4. S in V ₁ < 2 mm	4
5. R in V ₁ + S in V ₅ or V ₆ > 10.5 mm	4
6. Right axis deviation > 110°	4
7. S in V ₅ or V ₆ ≥ 7 mm and each ≥ 2 mm	3
8. R/S in V ₅ or V ₆ ≤ 1	3
9. R in V ₁ ≥ 7 mm	3
10. S ₁ , S ₂ , and S ₃ each ≥ 1 mm	2
11. S ₁ and Q ₃ each ≥ 1 mm	2
12. R' in V ₁ earlier than 0.08 sec and ≥ 2 mm	2
13. R peak in V ₁ or V ₂ between 0.04 and 0.07 sec	1
14. S in V ₅ or V ₆ ≥ 2 mm but < 7 mm	1
15. Reduction in V lead R/S ratio between V ₁ and V ₄	1
16. R in V ₅ or V ₆ < 5 mm	1
Interpretation of point score:	
10 points: Right ventricular enlargement.	
7 to 9 points: Probable right ventricular enlargement or hemodynamic overload.	
5 to 6 points: Possible right ventricular enlargement or hemodynamic overload.	

This patient was treated with bronchodilators, and following improvement of her respiratory status had resolution of P wave voltages, a leftward rotation of the axis to 90°, and loss of the R wave in V₁. The T waves remained slightly inverted in V₂ and V₃. The tachycardia resolved as the bronchospasm improved.

DIAGNOSIS: (1) Sinus tachycardia; (2) Acute right atrial enlargement; (3) Acute right ventricular enlargement.

REFERENCES

1. Macruz R, Perloff JK, Case RB: A method of electrocardiographic recognition of atrial enlargement. *Circulation* 17:882, 1958.
2. Human GP, Snyman HW: The value of the Macruz index in the diagnosis of atrial enlargement. *Circulation* 27:935, 1963.
3. Puech P: The P wave: Correlation of surface and intraatrial electrocardiograms. *Complex Electrocardiology II, Cardiovascular Clinics*. Philadelphia, F. A. Davis, Co, vol 6, no 1, 1974, p 43.
4. James TN, Sherf L: P waves, atrial depolarization and pacemaking site. *Advances in Electrocardiology*, vol II. New York, Grune and Stratton, 1976, p 13.
5. Sokolow M, Lyon TP: The ventricular complex and right ventricular hypertrophy as obtained by unipolar, precordial and limb leads. *Am Heart J* 38:273, 1949.
6. Flowers NC, Horan LG: Subtle signs of right ventricular enlargement and their relative importance. *Advances in Electrocardiology*, vol I. New York, Grune and Stratton, 1972, p 297.
7. Flowers NC, Horan LG: *Heart Disease. A Textbook of Cardiovascular Medicine*. Philadelphia, W. B. Saunders, Co, 1980, chap 7, p 226.
8. Friedman HH: *Diagnostic Electrocardiology and Vectorcardiology*. New York, McGraw-Hill, 1971, p 289.

Tennessee Hypertension Program

SUZANNE BURNS

The Department of Public Health operates a federally sponsored program for Hypertension Control, currently funded under Section 317(a) of the Public Health Service Act. There are nine projects serving 25 counties. The long range goals of the program, as stated by the Federal Bureau of Community Health Services, are that by March 31, 1984, each state should have:

- A system to assure that blood pressure screening, diagnosis, and referral for treatment is available to at least 90% of the identified target population every two years; and
- A follow-up system to assure that all diagnosed hypertensives in the target population are enrolled in a treatment program unless they specifically decline to participate.

The counties of the United States are divided into quartiles based on the percentage of hypertensives estimated to be living in the area, with first quartile counties representing the highest percentage. Tennessee has 36 first quartile and 36 second quartile counties. The remainder of Tennessee's counties fall into the third quartile; there are no fourth quartile counties in the state. Emphasis is placed on the counties with first and second quartile populations, with special attention to the high-risk, hard-to-reach individuals, particularly young adult males, black and white. Since these persons seldom seek medical attention, blood pressure screenings are arranged at work sites. The greatest benefits accrue when the problem is identified early in high-risk persons, and modification procedures can be instigated before permanent damage occurs.

Program services include blood pressure screening, referral for diagnosis and/or treatment, diagnosis, and follow-up services. No funding is available for treatment. In screening and referral practice the projects are expected to adhere to standards established by the 1980 Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure. (A copy of this report is available through the Tennessee Department of Public Health, Division of Chronic Disease Services, C2-212 Cordell Hull Building, Nashville, TN 37219.)

The local physicians are important sources for referral when patients are identified with elevated blood pressure. Many physicians are currently working closely with these projects and many more will be contacted as the activities are expanded. Naturally, when private patients are identified by screening procedures as having an elevated pressure they are immediately referred to their regular physician for whatever follow-up and treatment is deemed necessary by the physician.

In some ways this is a program of numbers. Accountability is required. A need for continued funding on a nationwide basis must be demonstrated. It is estimated that 60 million Americans suffer from high blood pressure. Of this number, 1,441,495 are estimated to be Tennesseans. The dangers of hypertension are well known, but unless information can be translated into numbers which Congress can understand, continuation of funding will be difficult. The program relies heavily on the local physicians in project areas to assist as they diagnose and treat those patients referred to them. Other referral sources include primary health care centers and regional and local health departments.

The program has in place a computerized data collection and patient tracking system with the

From the Tennessee Department of Public Health, Nashville.

main purpose to develop statistics such as the number of people screened, new diagnoses made, and patients followed up. It also provides for those persons who are screened and identified as having elevated blood pressures to be eligible for follow-up activities, which comprise a major component of the program. Maintenance of contact with the patients is important to determine whether diagnoses were confirmed and treatments begun. The project personnel will endeavor to contact patients and physicians to obtain this information.

Private physicians in the project areas are

highly important, since confirmation of screening diagnoses and treatment of the patients, if indicated, will be their prerogatives. Since the program has no provision for these activities, cooperation is needed in providing information that patients did or did not follow screening advice by seeking further diagnosis and/or treatment.

It is hoped that the program personnel and physicians working together will greatly improve the welfare of the hypertensive—or potentially hypertensive—people in our communities.

Medical Grand Rounds...

(Continued from page 879)

also be important in the destruction of parasites.¹⁴ Furthermore, for reasons we don't quite understand, certain hormonal activities of the host may modify the worm's ability to develop into the adult form and inhibit its ability to produce eggs. The parasite, in turn, avoids all this by minimizing its antigenicity. This is particularly evident in schistosomiasis, which is a migratory parasitic disease in which the developing larvae (schistosomula) adopt a core of antigens from the human host, making the host unable to differentiate the worm from itself, thereby allowing the worm to set up permanent housekeeping.¹⁶

Figure 3 diagrams this intricate pattern of immune responses and indicates the eosinophil's central role as the effector arm of immunity to parasitic diseases.

REFERENCES

- Guill MA, Odom RB: Larva migrans complicated by Loeffler's syndrome. *Arch Dermatol* 114:1525, 1978.
- Muhleisen JP: Demonstration of pulmonary migration of the causative organism of creeping eruption. *Ann Intern Med* 38:595, 1963.
- Fuller CE: A common source outbreak of cutaneous larva migrans. *Public Health Rep* 81:186, 1966.
- Stone OJ, Newell GB, Mullins JF: Cutaneous strongyloidiasis: Larva currens. *Arch Dermatol* 106:734, 1972.
- Wright DO, Gold EM: Loeffler's syndrome associated with creeping eruption (cutaneous helminthiasis). *JAMA* 118:1082, 1945.
- Blumenthal DS: Intestinal nematodes in the United States. *N Engl J Med* 297:1437, 1977.
- Tan JS: Common and uncommon parasitic infections in the United States. *Med Clin North Am* 62:1059, 1978.
- Aziz EM: *Strongyloides stercoralis* infestation: Review of the literature and report of 33 cases. *South Med J* 62:806, 1969.
- Neefe LI, Pinilla O, Garagusi VF, et al: Disseminated strongyloidiasis with cerebral involvement. A complication of corticosteroid therapy. *Am J Med* 55:832, 1973.
- Purtilo DT, Meyers WM, Connor DH: Fatal strongyloidiasis in immunosuppressed patients. *Am J Med* 56:488, 1974.
- Schantz PM, Glickman LT: Current concepts in parasitology. Toxocaral visceral larva migrans. *N Engl J Med* 298:436, 1978.
- Case Records of Massachusetts General Hospital: Case 13-1979. *N Engl J Med* 300:723, 1979.
- Norman PS: The clinical significance of IgE. *Hosp Pract* 10:41, 1975.
- Kazura JW: Host defense mechanism against nematode parasites: Destruction of newborn *Trichinella spiralis* by human antibodies and granulocytes. *J Infect Dis* 143:712, 1981.
- Butterworth AE, David JR: Eosinophil function. *N Engl J Med* 304:154, 1981.
- David JR, Butterworth AE: Immunity to Schistosomes: Advances and prospects, editorial. *Ann Intern Med* 91:641, 1979.

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ALLEN S. EDMONSON

Charity

Medical education and research have been suffering from inflation and a steadily diminishing supply of funds for several years. Few, if any, of us prefer galloping inflation to the budgetary restraints and tax cutting of the present administration. Yet the money crunch in medical education and in medical research is having a deleterious effect which may well be even more serious than is apparent presently. Education and research are the future for all of us. The "best medical care in the world" could easily become third rate in not too many years without the continued financing of what a healthy corporation calls its research and development.

Charity or charitable donations are an important part of the philosophy of life for most of us. Sharing with the less fortunate and giving for worthy causes are not only a part of almost all religions, but still have the official blessing of the

Internal Revenue Service. Foundations to collect and administer funds for medical education and for medical research have been in existence for several years but have never been more important to the future of medicine than now. The AMA-ERF provides direct return of collected monies to designated local medical schools. Of the medical specialty research foundations, my specialty, orthopedic surgery, has its Orthopedic Research and Education Foundation which funds researchers in residency, in teaching centers, and in private practice. There should be no problem in finding a recipient for your charity. Let charity begin at home and include the future of our profession among the needy. That can't be selfish or self-serving, but if you think it is, just consider it as one more thing you have purchased for yourself and your children . . . and it's tax deductible!

Allen S. Edmonson M.D.

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DECEMBER, 1981

editorials

"O Tannenbaum, O Tannenbaum. . ." Or, Christmas in October

It is October 6, and I am brought up short as I hear from the TV set the words, "We have lovely Christmas trees. . . ." Sure enough, there before my eyes is a brightly lit and trimmed tree in all its splendor, announcing that Christmas is here!

Christmas? In October?

Disgraceful! How will that tree look come December 25, with brittle limbs and falling needles? A real fire-trap! What have they done to Christmas? It has been desecrated and degraded. . . .

God repented that He had made man, and all but destroyed him with a flood. God fulminated against man in thunder and lava eruptions on Sinai, and gave man laws to live by; it was in vain. Man either would not or could not obey.

Then God decided, "If you can't lick 'em, join 'em," and so one Christmas (the first) He became one of us. He took the worst his lawless, self-centered, self-righteous creatures had to offer, and survived. He continues to survive our indifference and our outright hostility. The holy, omnipotent One turns to his disobedient offspring offering love in place of the whip we deserve.

And so I choke back the expletives that come to my lips over the commercialization of Christmas, and the disdain shown God by his greedy creation. He has survived worse, without my help, and I have a feeling Christmas will survive the worst the commercial interests, the American Civil Liberties Union, and the United States Supreme Court, not to mention misdirected zeal, can do to it.

Mary McGrory, a columnist with whom I only infrequently agree, put it well a couple of Christmases back: "Part of observing Christmas is withholding the censure that leaps to mind when we observe glaring violations of the spirit of the occasion."

It is what God has done in giving us the day. I doubt He expects either more or less of us.

Therefore, observe the day in Peace, Love, and Prosperity.

In short:

"God rest ye merry, Gentlemen (and
Ladies);

"Let nothing you dismay."

J.B.T.

Higher Ground

Clinging to the side of the Rock of Gibraltar are the ruins of a castle, built by the Moors when they overran Western Europe in the eighth century. The Moors are long gone, and within recent memory this key to the Mediterranean has been a symbol not only of British might, but of all that is staunch and solid. I was on "The Rock" just after World War II, when it was bristling with batteries of huge guns trained on Europe and Africa and the narrow straights that divide them.

The streets were bustling with the military and the workers who came in daily from across the Spanish border, a short distance away across the airstrip. (Contrary to the notion held by a lot of people, Gibraltar is a peninsula connected to Spain, and not an island.)

Now Gibraltar is a sleepy town of 25,000, bilingual but intensely British. The gates to Spain have been sealed by the Spanish government. The narrow streets are still clogged, but with tourists and home folks who overflow the narrow sidewalks to compete for space with the automobiles for which those streets were never designed. The empty gun emplacements stare like sightless eyes from dark sockets on the cliff face, marked only by signs, "Prince Ferdinand's Battery," "Queen Charlotte's Battery," and so on. You can wander through the galleries and passageways, once filled with ammunition for the shore batteries that riddle the limestone mass. St. Michael's cave is a huge underground amphitheater.

Why is "Gib" no longer fortified? This seems a natural question to ask about such an apparently impregnable fortress. But modern weaponry has rendered it as obsolete as the swords that first defended it. And as for being "solid as the rock of Gibraltar"—well, that is about as sound as the dollar; one hopes Prudential, whose emblem the rock is, is not as shot through with holes.

The world crumbles around us, and the old sureties fade away—but that is not a new thing. The lesson of Gibraltar—of all the Gibaltars, past, present, and future—is that even the most solid ground the world has to offer is sinking sand, a dismal outlook unless one has higher ground from which to view the shambles. That higher ground is God's Christmas gift.

There are other gifts for which I am grateful, not just at Christmas, but all year long. I am thankful for all of you out there who keep the *Journal* going—you, our contributors and readers. Without the one we could not continue; without the other we would have no need to. Then there is the TMA staff who make it possible, and the Board of Trustees by whose sufferance the *Journal* exists. Finally, but not least, there are family and friends. All these people are our real treasure, staunch and solid.

And Gibraltar? Only a splendid monument, and like all monuments, of not much help.

J.B.T.

in memoriam

William Byrnes Acree, age 61. Died October 15, 1981. Graduate of University of Tennessee College of Medicine. Member of Northwest Tennessee Academy of Medicine.

Thomas Grizzard, age 73. Died October 17, 1981. Graduate of Vanderbilt University School of Medicine. Member of Nashville Academy of Medicine.

William Maurice Jackson, age 68. Died October 27, 1981. Graduate of University of Tennessee College of Medicine. Member of Dickson County Medical Society.

Horace Barton McSwain, age 75. Died August 11, 1981. Graduate of Vanderbilt University School of Medicine. Member of Nashville Academy of Medicine.

new members

The *JOURNAL* takes this opportunity to welcome these new members to the Tennessee Medical Association.

BLOUNT COUNTY MEDICAL SOCIETY

S. Craig Jarvis, M.D., Maryville
Richard H. White, M.D., Maryville

CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY

Douglas Lee Vanderbilt, M.D., Chattanooga

CONSOLIDATED MEDICAL ASSEMBLY OF WEST TENNESSEE

Clifford L. Garrard, Jr., M.D., Jackson
Frank D. Parks, M.D., Jackson
William E. Routt, Jr., M.D., Jackson

KNOXVILLE ACADEMY OF MEDICINE

James E. Becker, M.D., Knoxville
Allan M. Grossman, M.D., Knoxville

MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

C. Radford Andrews, M.D., Memphis
Alvro Manuel Camacho, M.D., Memphis
Nicholas-John Economides, M.D., Memphis
Francisco G. Moreno, M.D., Memphis
Mahfuzur Rahman, M.D., Memphis

Bhaskar Narayan Rao, M.D., Germantown
Dan H. Shell, III, M.D., Memphis
Wayne B. Wheeler, M.D., Germantown

**ROANE-ANDERSON COUNTY
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Frederick C. Hartley, M.D., Johnson City

Chris B. Hemphill, M.D., Johnson City

Ronald L. McGowan M.D., Johnson City

**TMA Members Receive
AMA Physician's Recognition Award**

Seventeen TMA members qualified for the AMA Physician's Recognition Award during September, 1981.

To qualify for the PRA, a minimum of 150 hours of continuing medical education must be earned over a three year period; 60 of these hours must be Category 1.

This list does not include members who reside in other states. Names of additional PRA recipients will be published as they are received from AMA.

Duane C. Budd, M.D., Johnson City
Lawrence L. Cohen, M.D., Memphis
Thomas H. Curtis, M.D., Chattanooga
Starling C. Evins, M.D., Franklin
James W. Gibson, Jr., M.D., Johnson City
Michael E. Glasscock, M.D., Nashville
Glenn S. Gollobin, M.D., Nashville
John R. Howick, M.D., Chattanooga
Jimmy W. Kee, M.D., Jackson
James B. Kelley, M.D., Columbia
Chung-Yuen Liu, M.D., Chattanooga
David M. Orth, M.D., Nashville
Warren C. Ramer, M.D., Lexington
Vincent L. Solomito, M.D., Memphis
Jerry S. Sutton, M.D., Nashville
James H. Thomas, M.D., Savannah
Robert A. Valosik, M.D., Nashville

personal news

Richard Aasheim, M.D., has been elected president of the medical staff at Takoma Adventist Hospital in Greeneville. Other officers elected include *Gordon Marsa, M.D.,* vice president; and *Richard Stanley, M.D.,* secretary-treasurer.

H. William Scott, M.D., Nashville, has been given a Distinguished Alumnus Award by the University of North Carolina at Chapel Hill.

national news

From the AMA's Office in Washington, D.C.

Budget Cuts Slated

The administration is forging ahead with its plan to slash 12% from domestic federal programs despite mounting congressional resistance.

A complicated budget battle is engulfing the Capitol with the latest wrinkle—a decision by President Reagan to defer some \$1 billion in spending while Congress deliberates the issue of a new round of cuts.

At present all federal agencies are operating under a stop-gap continuing resolution to keep them funded. Only 12 major appropriations bills to provide money for the current fiscal year that started Oct. 1 have been adopted by Congress. The House has passed ten bills; the Senate, two.

Most of the appropriations bills reflect the \$30 billion of savings called for in the massive budget reconciliation measure approved by Congress last August.

But so far there's been no action by Congress on the President's recent proposal to pare another \$13 billion from federal spending during the current fiscal year. This would involve an extra \$1 billion taken from federal health program expenditures.

An indication of the difficulties facing the administration came in the House vote on the Health and Human Services (HHS) Department appropriations bill when a move to send the bill back to committee to make further cuts as requested by the President was defeated 249 to 168.

The President's plan to defer spending by \$1 billion from the initial period would temporarily reduce spending for 500 to 800 domestic programs below the stop-gap rate set by Congress. Authority for such de-

ferrals came from the 1974 Budget Act. House Speaker Thomas O'Neill charged the tactic is "a backdoor method to frustrate the law."

The next months promise to pose stern confrontations between Congress and the administration on the spending issue which will dominate the domestic scene through the rest of the session. Presidential vetoes of over-the-mark appropriations bills already have been threatened.

Package Insert Plug Pulled

The AMA has joined an assortment of professional and pharmaceutical groups in urging the Food and Drug Administration (FDA) to pull back from plans to mandate patient package inserts (PPIs) for ten commonly prescribed drugs.

The three-year pilot program was put on hold early this year by FDA Commissioner Arthur Hull Hayes, Jr., M.D. The commissioner has said that he favored providing information to patients about drugs, but was seeking new information about benefits and costs.

In AMA testimony trustee Alan R. Nelson, M.D., said a PPI must "have a demonstrable effect on patient compliance with a drug regimen in order for it to be deemed clinically or cost effective." If it doesn't, then it provides no benefit to patient or physician, he said.

While questioning the validity of a study of PPIs conducted for FDA by the Rand Corp., Dr. Nelson noted that the study appeared to show that PPIs did not improve patient compliance with prescribed drug therapy, and urged the agency to rescind the mandatory PPI program.

Dr. Nelson said the AMA supports the provision of information about drugs to patients by physicians, and he urged the FDA to consider the possibility of a private sector demonstration program with physicians, rather than pharmacists, as the dispensers of information.

announcements

CALENDAR OF MEETINGS

NATIONAL

- | | |
|------------|--|
| Jan. 11-15 | Miami Winter Symposium — From Gene to Protein: Translation into Biotechnology (Univ. of Miami) — Miami |
| Jan. 21-26 | American Academy of Orthopaedic Surgeons — New Orleans |
| Feb. 3-7 | American College of Psychiatrists — Hyatt House, Orlando |
| Feb. 14-17 | North American Medical/Dental Association Symposium, Wildwood Inn, Snowmass, Colo. |
| Feb. 14-18 | American Society of Neuroimaging — Hotel Cerromar, Dorado Beach, Puerto Rico |
| Feb. 21-25 | North American Medical/Dental Association Conference — Wildwood Inn, Snowmass, Colo. |
| Feb. 25-27 | American Psychopathological Association — Grand Hyatt Hotel, New York City |

Help for Impaired Physicians

Through its Committee on Impaired Physicians, TMA helps doctors who are suffering from alcoholism, other drug addiction, psychiatric disorders or senility. The thrust of the program is rehabilitative, not punitive. The Committee is composed of physicians who have special expertise in these areas, some from personal experience. Effective treatment for these illnesses is achieved most easily when the disease is detected early and family, friends, and associates are urged to avoid misguided sympathy which enables the condition to deteriorate.

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The continuing medical education accreditation program of the TMA has full approval by the Accreditation Council for Continuing Medical Education. An accredited institution or organization may designate for Category 1 credit toward the AMA Physician's Recognition Award those CME activities that meet appropriate guidelines. If you wish information as to how your hospital or society may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203.

IMPORTANT NOTICE

Published in this section are all educational opportunities which come to our attention which might be of interest to our membership. As some of these are very long, full year schedules, and others are detailed descriptions of courses, in order to conserve space, most of them will be published in only one issue of the Journal.

IN TENNESSEE

VANDERBILT UNIVERSITY

Clinical Training Program

Opportunities for advanced clinical education for physicians in family practice and in various subspecialties have been developed by the School of Medicine and the Division of Continuing Education of Vanderbilt University. The practicing physician, with the guidance of the participating department chairman, can plan an individualized program of one to four weeks to meet recognized needs and interests. The experience will include contact with patients, discussion with clinical and academic faculty, conferences, ward rounds, learning individual procedures, observing new surgical techniques, and access to excellent library resources. Experience in more than one discipline may be included.

Participating Departments and Divisions

Allergy & Immunology	Samuel Marney, M.D.
Anesthesiology	Bradley E. Smith, M.D.
Cardiology	Gottlieb C. Friesinger, III, M.D.
Chest Diseases	James D. Snell, M.D.
Clinical Pharmacology	John A. Oates, M.D.
Dermatology	Lloyd King, M.D.
Diabetes	Oscar B. Crofford, M.D.
Endocrinology	Grant W. Liddle, M.D.
Gastroenterology	Steven Schenker, M.D.
General Internal Medicine	W. Anderson Spickard, M.D.
Hematology	Sanford B. Krantz, M.D.
Infectious Diseases	Zell A. McGee, M.D.
Medicine	Grant W. Liddle, M.D.
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Obstetrics & Gynecology	Lonnie S. Burnett, M.D.
Oncology	Robert Oldham, M.D.
Orthopedics	Paul W. Griffin, M.D.
Pathology	William H. Hartmann, M.D.
Pediatrics	David T. Karzon, M.D.
Psychiatry	Marc H. Hollender, M.D.
Radiology	A. Everette James, Jr., Sc.M., J.D., M.D.
Renal Diseases	H. Earl Ginn, M.D.
Rheumatology	Theodore Pincus, M.D.
Surgery	
Cancer Chemotherapy	Vernon H. Reynolds, M.D.
General	H. William Scott, Jr., M.D.
Neurological	William F. Meacham, M.D.
Ophthalmology	James H. Elliott, M.D.
Oral	H. David Hall, D.M.D.
Pediatric	James A. O'Neill, M.D.
Plastic	John B. Lynch, M.D.

Renal Transplantation	Robert E. Richie, M.D.
Thoracic & Cardiac	Harvey W. Bender, M.D.
Urology	Robert K. Rhamy, M.D.

Eligibility: All licensed physicians are eligible. **Administrative Fee:** \$200 per week. **Credit:** AMA Physician's Recognition Award (Category 1) and AAFP Continuing Education Accreditation. **Application:** For further information and application, contact Continuing Medical Education, Vanderbilt University Medical Center, Nashville, TN 37232, Tel. (615) 322-2716.

MEHARRY MEDICAL COLLEGE

Extended Continuing Education Program

Arrangements have been made with the following services and departments in the medical school to allow practicing physicians to participate in that service's activities for a period of one to four weeks. This program provides an opportunity for physicians to study in depth for a specified period. The schedule of activities is individualized in response to the physician's request by the participating department. The experience includes conferences, ward rounds, audiovisual materials and contact with patients, residents and faculty.

Participating Departments

Anesthesiology	Ramon S. Harris, M.D.
Family Practice	John Arradondo, M.D.
Internal Medicine	
Cardiology	John Thomas, M.D.
	Kermit R. Brown, M.D.
	Qamar A. Kahn, M.D.
Chest Disease	Joseph M. Stinson, M.D.
	Paul A. Talley, M.D.
	Edward A. Mays, M.D.
Dermatology	Thomas W. Johnson, M.D.
	David Horowitz, M.D.
Gastroenterology	Ludwald O. P. Perry, M.D.
	Buntwal M. Somayaji, M.D.
General Medicine	Edward A. Mays, M.D.
Hematology/Oncology	Robert S. Hardy, M.D.
Neurology	Calvin L. Calhoun, Sr., M.D.
	Gregory Samaras, M.D.
Obstetrics & Gynecology	Henry W. Foster, M.D.
Ophthalmology	Axel C. Hansen, M.D.
Orthopedics	Wallace T. Dooley, M.D.
Pathology	Louis D. Green, M.D.
	John C. Ashhurst, M.D.
Pediatrics	E. Perry Crump, M.D.
Surgery	
General	Louis J. Bernard, M.D.
Neurological	Charles E. Brown, M.D.
Thoracic and Cardiovascular	David B. Todd, M.D.
	Ira D. Thompson, M.D.
Urology	Marcelle R. Hamberg, M.D.

Fee: \$100 per week. **Credit:** AMA Physician's Recognition Award (Category 1), AAFP Continuing Education Accreditation, and Continuing Education Units by Meharry Medical College. **Application:** For further information contact Frank A. Perry, Sr., M.D., Director, Continuing Education, Meharry Medical College, 1005 18th Ave. North, Nashville, TN 37208, Tel. (615) 327-6235.

UNIVERSITY OF TENNESSEE

Continuing Education Schedule

This comprehensive listing of UTCHS courses includes programs of the Chattanooga, Knoxville, and Memphis units. The codes (C), (K), and (M) indicate the continuing education unit handling the arrangements for a particular program.

Feb. 1-3	(K)	Emergency Medicine Symposium
Feb. 6-13	(K)	4th Annual KAM Education Ski Meeting
March 14-19	(M)	15th Annual Family Practice Review Course
April 5-7	(K)	Hypertension
June 10-12	(K)	ENT and Otolaryngology

Community-Based CME

Knoxville Campus

Blount Memorial Hospital; Maryville, Tenn.
Every Tuesday; 7-8 a.m. (1 hr. credit)

Jellico Hospital; Jellico, Tenn.
Monthly, third Tuesday; 7-9 p.m. (2 hrs. credit)

Morristown-Hamblen County Hospital; Morristown, Tenn.
Alternate months, third Tuesday; 6:30-8 p.m. (1.5 hrs. credit)

Sweetwater Community Hospital; Sweetwater, Tenn.
Monthly, second Wednesday; 12:00 noon (1 hr. credit)

Takoma Hospital; Greeneville, Tenn.
Monthly, dates vary; 6:30 p.m. (1-2 hrs. credit)

Memphis Campus

UPDATES IN MEDICINE

Carroll County Hospital; Huntingdon, Tenn.
McKenzie Memorial Hospital; McKenzie, Tenn.
Henry County Hospital; Paris, Tenn.
Monthly, third Monday; 6:15-9 p.m. (2 hrs. credit); locations rotate.

Nashville Memorial Hospital, Madison, Tenn.
Monthly, third Tuesday; 12:00 noon (1 hr. credit)

If you would like assistance in planning a community-based CME program, contact the Associate Dean for CME and every attempt will be made to assist you through one of our three campuses.

For further information about any of these courses, please call the appropriate individuals below:

- (C) Mr. LeRoy J. Pickles, Chattanooga
Tel. (615) 756-3370
- (K) Ms. Kay Laurent, Knoxville
Tel. (615) 971-3345
- (M) Ms. Grace Wagner, Memphis
Tel. (901) 528-5547

or write or telephone: James E. Farris, Ed.D., Assistant Dean for CME, University of Tennessee College of Medicine, 800 Madison Ave., Memphis, TN 38163, Tel. (901) 528-5530.

BAPTIST MEMORIAL HOSPITAL

Feb. 6	Loss Prevention
March 4-6	The Hypothalamus in Health and Disease: Reproduction, Growth, Feeding, and Behavior
March 26-27	Psychiatry for the Primary Care Physician
April 30-May 1	Current Controversies in Chron's Disease
May 6-8	Gynecological Surgery
May 21-22	Hypertension: 1982

For information contact Educational Support Services, Baptist Memorial Hospital, 899 Madison Ave., Memphis, TN 38146; or call toll-free 1-800-542-6848 if located in Tennessee, or 1-800-238-6893 if located outside Tennessee, and ask for Educational Support Services.

IN SURROUNDING STATES

UNIVERSITY OF KENTUCKY

Mini-Residencies in Office Management Of Emotional Problems

The objective of this course is to give physicians an ideal emotional counseling technique that fits busy office practices. The technique uses a concept of emotions that is consistent with human anatomy and psychophysiology. Yet, the technique requires no more physician time or patient cost than routine evaluations of new patients. Finally, the technique is readily understandable and easy for practitioners to apply.

One, two and three week courses. Minimum of 40 hours per week. *Tuition Fee:* \$350 per week for the 1st & 2nd week of training; \$500 for 3rd week of supervised practice with patients in the Intensive RBT Treatment Program.

For further information contact Maxie C. Maulsby, Jr., M.D., Office of Continuing Medical Education, Dept. of RBT, University of Kentucky, Lexington, KY 40506.

BOWMAN GRAY

Courses in Ultrasound

Two eight-week courses in sonic medicine will be offered from Jan. 11-March 5, and April 26-June 18. *Credit:* 35 hours per week in AMA Category 1.

The following real time courses will also be given: March 22-26 (abdomen); April 15-16 (breast).

For information contact James F. Martin, M.D., Center for Medical Ultrasound, Bowman Gray School of Medicine, Winston-Salem, NC 27103, Tel. (919) 748-4505.

OF SPECIAL INTEREST

AMERICAN LUNG ASSOCIATION OF LOUISIANA

Jan. 13-16 SUPERCOURSE VII—A Clinical Course on Critical Pulmonary Care (cosponsored by American Thoracic Society of Louisiana)—Fairmont Hotel, New Orleans. *Credit:* AMA Category 1. *Fee:* \$225 for physicians; \$195 for fellows, residents and interns.

For information contact Course Coordinator, American Lung Association of Louisiana, 333 St. Charles Ave., Suite 500, New Orleans, LA 70130, Tel. (504) 523-5864.

HAIR REPLACEMENT SYMPOSIUM

Feb. 3-4 International Advanced Hair Replacement Symposium (sponsored by the American Academy of Facial Plastic and Reconstructive Surgery)—Birmingham, Ala. *Fee:* \$420.

For information contact Dr. D. B. Stough, III, Program Director, Doctors Park, Hot Springs, AR 71901.

AMERICAN COLLEGE OF CHEST PHYSICIANS

Feb. 4-6 Hypertension 1982: Practical Management Considerations for the Physician in Clinical Practice—Sundial Beach and Tennis Resort, Sanibel Island, Fla. *Credit:* 16 hours AMA Category 1. *Fee:* ACCP members \$190; nonmembers \$220.

March 24-27 International Conference on Occupational Lung Disease—Hyatt Regency Hotel, Chicago.

For information contact Department of Education, American College of Chest Physicians, 911 Busse Hwy., Park Ridge, IL 60068.

MEDICAL COLLEGE OF GEORGIA

March 2-5 Emergency Medicine/Trauma—Tamarron Resort, Durango, Colo.

July 26-28 Pediatric Update 1982—Kiawah Island, S.C.

Aug. 2-6 Taxes and Investments—Hilton Head Island, S.C.

Aug. 9-11 High Risk Obstetrics—Kiawah Island, S.C.

For information contact Division of Continuing Educa-

tion, Medical College of Georgia, Augusta, GA 30912, Tel. (404) 828-3967.

NORTHWESTERN UNIVERSITY

March 8-12 Sports Medicine Postgraduate Course—Maui, Hawaii. *Credit:* 25 hours AMA Category 1.

For information contact Bates Noble, M.D., Northwestern University Center for Sports Medicine, 303 E. Chicago Ave., Chicago, IL 60611.

RENT MY CONDOMINIUM AT HILTON HEAD ISLAND SOUTH CAROLINA

For more information contact:

Tom Reed
Attention: Mrs. Parton
117 East Main Street
Murfreesboro, Tennessee 37130
Telephone: (615) 890-6464

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Highlights of the TMA Board of Trustees Meeting

October 4, 1981

The following is a summary of the major actions taken by the Board of Trustees of the Tennessee Medical Association at its regular fourth quarter meeting in Nashville on October 4, 1981.

THE BOARD:

Committee on Emergency Medical Services

Approved a recommendation from the Emergency Medical Services Committee that three psychiatric emergency seminars be conducted by TMA in 1982.

Governmental Medical Services Committee

Reaffirmed its position in support of maintaining the Medicaid Program within the Tennessee Department of Public Health.

Impaired Physician Committee

Heard a report that the Impaired Physician Committee had received four additional identifications since the June meeting, bringing the total to 68 identifications. There have been five additional physicians who have undergone and completed treatment and are back in practice, bringing the total to 17 who are on the Committee's follow-up and monitor list.

Radiological Safety Resolution

Reaffirmed commitment to a TMA House of Delegates resolution calling for a committee to be appointed to implement a safety education program for personnel performing radiological procedures in physicians' offices.

Hospital Ambulatory Care Facilities

Heard a report from John Outlan, M.D., Collierville, regarding a non-profit hospital corporation establishing a hospital ambulatory care facility in Collierville.

Cancer Registry

Heard a report from John L. Sawyers, M.D., Nashville, that there may be support in the Tennessee General Assembly to establish a cancer registry in Tennessee. Dr. Sawyers recommended TMA support of this concept and that TMA give guidance on how to set up the program. Dr. Sawyers indicated that if the registry were in the Department of Public Health and properly financed, it would be of value to physicians and not just a depository of useless data. The Board agreed to support the program, provide medical input in an advisory status and support the legislation if introduced.

TMA Prescribing Improvement Program

Heard a report that TMA's program in prescribing improvement received a project review in June from the National Center for Health Studies Research. The report of the review was excellent and notification had been received of continuation of funding through March 1982. The next module for study in the program will be the drug Valium.

SVMIC

Heard a report from Allen S. Edmonson, M.D., Memphis, TMA President, that State Volunteer Mutual Insurance Company is doing well and is not having the problems that some of the other states and doctor-owned companies are experiencing. He stated the biggest problem was

physician participation. SVMIC is in the process of developing a dividend for the first policyholders for the year 1976-1977 and two actuarial studies are being undertaken to determine if a dividend is feasible. Dr. Edmonson reported that SVMIC did not increase premiums this year.

IMPACT

Made these appointments to the IMPACT Board: Jack E. Butterworth, M.D., First District; Harold L. Neuenschwander, M.D., Second District; Paul V. Nolan, M.D., Third District; Thurman L. Pedigo, M.D., Fourth District; Robert W. Ikard, M.D., Fifth District; Clarence R. Sanders, M.D., Sixth District; Oscar M. McCallum, M.D., Seventh District; Thomas K. Ballard, M.D., Eighth District; and Rex A. Amonette, M.D., Ninth District.

Third Quarter Financial Statement

Approved the Operating Report for the first nine months of 1981 and the investment account summary through Sept. 30, 1981.

Report from AMA Delegation Chairman

Endorsed the candidacy of A. Roy Tyrer, Jr., M.D., Memphis, for a seat on the AMA Board of Trustees.

Leo N. Levi National Arthritis Hospital

Dedicated to the Treatment of Arthritis and Related Disease



Fred Robertson, M.D.
Medical Director

*Diplomate, American Board
of Internal Medicine
Subspecialty of Rheumatology*

For Information Call: (501) 624-1281
Or Write: P.O. Box 850
Hot Springs, Arkansas 71901

1981 MEMBERSHIP ROSTER

TENNESSEE MEDICAL ASSOCIATION

An alphabetical listing of members of the Tennessee Medical Association by county medical society is published as a service to the membership. An asterisk (*) denotes physicians exempt from dues. A number sign (#) denotes a student member.

BEDFORD COUNTY MEDICAL SOCIETY

BARNES, DONALD D., SHELBYVILLE
BEAVERS, LANA SHAKON, SHELBYVILLE
* CHAMBERS, WALLACE LEE, SHELBYVILLE
* CUDDEK, ALBERT LEE, SHELBYVILLE
DERRYBERKY, JOHN S., SHELBYVILLE
FARRAK, TAYLOR, SHELBYVILLE
FELDBAUS, JOSEPH H., SHELBYVILLE
JOHNSON, SUE PAINE WELCH, SHELBYVILLE
* MOULDER, GRACE E., SHELBYVILLE
UNBY, FRED DILLARD, BELL BUCKLE
RICH, EARL FREEMAN, SHELBYVILLE
RICHARDS, AUBREY THOS, SHELBYVILLE
RUGERS, BENJ CARL, SHELBYVILLE
SELLS JR, SAMUEL P., SHELBYVILLE
STUBBLEFIELD, CARL THUS, SHELBYVILLE
* UMACK, SARA, SHELBYVILLE

BENTON-HUMPHREYS COUNTY MEDICAL SOCIETY

ALI, MAYSUDN SHUCAIR, MAVERLY
ALI, SUBHI DAMUD SUBDH, MAVERLY
BLACKBURN, WM H, CAMDEN
BLANTON, HAROLD L, COURTLAND, AL
BOURNE JR, ROBERT I, CAMDEN
BUTTERWORTH, JOE S, CAMDEN
GREGORY, J GORDON, MAVERLY
HARTLEY, MARK F, MAVERLY
LAWSON, JAMES J, NE JOHNSONVILLE
MC CLURE, WALLACE JOE, MAVERLY
NAGY, HUBA, MAVERLY
NAGY, LOIS, MAVERLY
STEPHENS, JDS WM, MAVERLY
* WALKER, ARTHUR WINFREY, MAVERLY
WRIGHT, WAYNE J, CAMDEN

BLOUNT COUNTY MEDICAL SOCIETY

AGEE, OLIVER KING, MARYVILLE
AHN, KYUNG M, MARYVILLE
AKIN, HOBARD E, MARYVILLE
BEARD, MARVIN ROBINSON, MARYVILLE
BELKNAP, JEFFRY ALAN, MARYVILLE
BLANKS, BILLY HARRELL, MARYVILLE
BOLLINGER JR, JOHN A, MARYVILLE
BOWEN, JOHN H, MARYVILLE
CALLAWAY JR, HENRY A, MARYVILLE
CALLAWAY, JAMES MILLER, MARYVILLE
CHRISTOFFERSON, JAMES W, MARYVILLE
CROWDER, CLAY G, MARYVILLE
* CROWDER, WM C, MARYVILLE
CROWDER, WM WILSON, MARYVILLE
DELAHAMMIT, JAMES RICHARD, MARYVILLE
DENTON, SANDRA M COLSTON, LOUISVILLE, KY
DORR, DAVID C, KNOXVILLE
DREYER, RUSSELL HARWELL, MARYVILLE
ELLIOTT, C DALE, MARYVILLE
ELLIOTT, WM EARL, MARYVILLE
EVANS, SAMUEL D, MARYVILLE
FINNEY JR, RAYMOND A, MARYVILLE
FLICKINGER, TED LAWRENCE, MARYVILLE
GARDNER, HENBERT COLBY, SEVIERVILLE
GREEN, BRUCE QUINTON, LOUISVILLE
HARALSON III, ROBT HATTON, MARYVILLE
* HARALSON JR, ROBT H, MARYVILLE
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HAUN JR, LOUIS EUGENE, MARYVILLE
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HOFFMANN, PAUL WILFRIED, MARYVILLE
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HOWARD, CECIL B, MARYVILLE
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INGRAM III, JOHN JACKSON, MARYVILLE
ISBELL JR, HUMER L, MARYVILLE
JARVIS, S CRAIG, MARYVILLE
KAMPERMAN, CULIN LEE, ALCOA
KINTNER, ELGIN P, MARYVILLE
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LAUGHMILLER, RAY W, MARYVILLE
LENTZ, JULIAN C, FAYETTEVILLE, NC
LEYEN, ROBT F, ROCKFORD
LUCAS, MELINDA ANN, ROCKESTER, NY
MANDRELL, JOE THUS, ALCOA
* MANNING, JOHN FRANKLIN, MARYVILLE
MARMON, KENNETH WALDU, MARYVILLE
MAYBEKKY, ALTON RAY, MARYVILLE

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MC CRUSKEY, DAVID L, MARYVILLE
MC KINNON JR, NORMAN A, MARYVILLE
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MUDKE, WILLIAM R, MARYVILLE
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MYNATT, ROBT U, MARYVILLE
NELSON JR, HENRY S, MARYVILLE
NELSON, HENRY SPEKRY, KNOXVILLE
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PODEFFITT, ROBT DAVID, MARYVILLE
* KAMSEY, BARNARD PERCY, MARYVILLE
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KICCIARDI, JAMES EDWARD, MARYVILLE
KUBERTS JR, JACK T, MARYVILLE
KUMANS, ALLAN, MARYVILLE
SEATON, ROBERT W, MARYVILLE
SIMPSON JR, USCAR L, MARYVILLE
SMALLEY JR, J BRYAN, MARYVILLE
THURSTON, TIMOTHY WM, MARYVILLE
VANDEGRIFT, HARRIS T, MARYVILLE
VINSANT, CHRISTOPHER L, MARYVILLE
VINSANT, LUCAS EUGENE, MARYVILLE
WHITE, RICHARD H, MARYVILLE
YARBUROUGH, JOHN A, MARYVILLE

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BATCHELOR, MARVIN R, CLEVELAND
BYAN, JOHN MILTON, CLEVELAND
BYERS, GLEN MARSH, CLEVELAND
BZIK, PETER, CLEVELAND
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CHASTAIN, ALLAN CHALMER, CLEVELAND
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DUNCAN, EUGENE MORRIS, CLEVELAND
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Lowe, JAMES CECIL, CLEVELAND
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ROGNESS, JOHN A, CLEVELAND
ROMAINE, CHAS BOYD, CLEVELAND
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SMITH, WM R, CLEVELAND
* STANBERRY, WM CECIL, CLEVELAND
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THURMAN, JAMES ROBT, CLEVELAND
VARNELL, GILBERT ABEL, CLEVELAND
YOUNGER, CLYDE P, CLEVELAND
ZACHARY JR, WALTER C, BLUE RIDGE, GA

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ANANU, YEENA, MUHENWALU
ANANU, VIKENJER, MUHENWALU
BLENDER, WILLIAM, LINCOLN
COLEMAN, ROBT M, WICKSON
ELDRU, PAKKEN DAVID, CENTERVILLE
HULLADAY, BETTIE L, CENTERVILLE
ML GINLEY, JAMES HENRY, CENTERVILLE
MEERS, JIMMY ARNOLD, PAKSONS
MICHELL, ANTONIO T, CENTERVILLE
MULITUR, MICHAEL GLENN, HOWARD, AL
KEDDY, RAMESH K, DECATURVILLE
TURNER JR, GORDON H, LINCOLN
TURNER, FREDERICK E, CENTERVILLE

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CRUTCHFIELD, JAMES DONALD, LA FOLLETTE
DAVIS, MATTHEW L, LA FOLLETTE
DAY, GED LOUIS, HARRIGATE
FARRIS, JAMES CLARENCE, LA FOLLETTE
GILES, JAMES W, LA FOLLETTE
HALL III, DONALD WAKER, LA FOLLETTE
HARTMAN, DONALD D, JELLCO
KATEK, CHAS ALVIN, JELLCO
PHYSE, JOHN C, LA FOLLETTE
SEARGEANT JR, LEE JESS, LA FOLLETTE
THOMPSON, GED STANLEY, HARRIGATE
WALKER, JESSE LEE, JELLCO
WILKENS, CHAS HENRY, JELLCO
WUD, BURGIN HENRY, LA FOLLETTE
WODDING, MARY ANN, JELLCO

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AIKEN, WM PRIGMORE, CHATTANOOGA
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ALBRITTON, JOHN THOS, CHATTANOOGA
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ALLEN, BILLY JASON, CHATTANOOGA
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ALPER, CHAS H, CHATTANOOGA
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ARNOLD, GULEMAN LEE, CHATTANOOGA
ARNOLD, IRA L, CHATTANOOGA
ATKINSON, JDS SPRUIT, CHATTANOOGA
AUG, ROBERT G, CHATTANOOGA
AVERY, JOEL EUGENE, CHATTANOOGA
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BANKS JR, WOODRUFF A, CHATTANOOGA
BANKS, SAM L LOUIS, CHATTANOOGA
BARD, RALPH MICHAEL, CHATTANOOGA
BAREDDY, VENKATA K R, CHATTANOOGA
BARNES, DAVID K, CHATTANOOGA
BARNES, H VERDAIN, CHATTANOOGA
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BECHARD, DOUGLAS L, CHATTANOOGA
BELLAM, KAMAMUHANA R, ST SIMON ISL, GA
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BERKY, WM BARTON, CHATTANOOGA
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 BUNDER, MICHAEL IAN, CHATTANOOGA
 BUNOEN JR, HARVEY D, CHATTANOOGA
 BUREKS JR, JEMISON D, CHATTANOOGA
 BUREKS, ROBT EUGENE, CHATTANOOGA
 BUXELL, JOHN FREDERICK, CHATTANOOGA
 BRACKETT, WM DAVID, CHATTANOOGA
 BRANNEN, FRANK S, CHATTANOOGA
 BRICE, CHARLES TERRY, CHATTANOOGA
 BRIMI, JOHN BENJ, CHATTANOOGA
 BRODAUSTONE, PAUL A, CHATTANOOGA
 BROOKS, JOEL DEVULENTINE, CHATTANOOGA
 BROOKSBANK, RONALD C, CHATTANOOGA
 BROWN, HUGH P, CHATTANOOGA
 BROWN, NEIL CHAS, CHATTANOOGA
 BROWN, REIO LLEWELLYN, CHATTANOOGA
 BRYAN, CALVIN PATRICK, CHATTANOOGA
 BUCHANAN JR, THOS F, CHATTANOOGA
 BUCHNER III, EDWARD F, CHATTANOOGA
 BUCHNER, WM FRANCIS, CHATTANOOGA
 BULLARD, ARCH H, CHATTANOOGA
 * BURKE, JOHN ARTHUR, HILTON HEAD ISL, NC
 BURNS, RANDEL PHILLIP, CHATTANOOGA
 BUTTRAM JR, WM K, CHATTANOOGA
 BUTTRAM, THOS LATHAM, CHATTANOOGA
 CAINE JR, WINSTON P, CHATTANOOGA
 CALDWELL, GARY BLAINE, CHATTANOOGA
 * CALDWELL, JAMES L, LOOKOUT MTN
 CALDWELL, LINA B, CHATTANOOGA
 CALHOUN, RICHARD ALLEN, CHATTANOOGA
 CAMPBELL, DONALD KOSS, CHATTANOOGA
 CAMPBELL, WILLIAM O'NEAL, CHATTANOOGA
 CANNON, DON ALLEN, CHATTANOOGA
 CANNON, GEORGE MARSHALL, SIGNAL MOUNTAIN
 * CANNON, MAURICE A, CHATTANOOGA
 CARROLL, RAMON LEONARD, CHATTANOOGA
 CAUGHRAN, BENNETT W, CHATTANOOGA
 CHADWICK, DAVID AIREY, CHATTANOOGA
 CHAMBERLAIN II, MURROW, CHATTANOOGA
 * CHASTAIN, CLEO, SAN ANTONIO, TX
 CHENG, TIEN H, CHATTANOOGA
 CLARK, C ROBT, CHATTANOOGA
 CLARK, JERRY ODYLE, CHATTANOOGA
 CLARK, MURRELL O, CHATTANOOGA
 CLEVELAND, CLIFTON RANCE, CHATTANOOGA
 CLEMENTS, JOEL BENJ, CHATTANOOGA
 * CLEMENTS, OSCAR H, CHATTANOOGA
 CODDINGTON, ROBT CHAS, CHATTANOOGA
 COLLINS, JOHN RICHARD, CHATTANOOGA
 * COMBES, FRANK CHAS, CHATTANOOGA
 * CORDLEY, JOHN L, TARPON SPRINGS, FL
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 HULLIOWAY, THUS LINTON, MEMPHIS
 HULLIOWAY JK, DAVID HUYT, MEMPHIS
 * HOLMES, JAMES ELMOKE, MEMPHIS
 HOLMES, JOHN PIEKKE, MEMPHIS
 HOLMES, PERRY UON, MEMPHIS
 HULT, HUEY THUS, MEMPHIS
 HUDD, STEPHEN THOS, MEMPHIS
 HURNE, ARTHUR E, MEMPHIS
 HUKTON, GLENN EDWARD, MEMPHIS
 HUTCHKISS, HUBERT LEECH, MEMPHIS
 HUOSHULDER, CHAS H, MEMPHIS
 HUUSTON, JOHN L, MEMPHIS
 HUVOIUS, JOHN R, MEMPHIS
 HOWARD JK, HECTOK SMYTHE, MEMPHIS
 * HOWARD, WM T, MEMPHIS
 HOWSE, ROBERT JULIAN, MEMPHIS
 HUWSEK, JOHN PATTON, MEMPHIS
 HUANG, SHANG PO, MEMPHIS
 HUBBARD, RONALD EUGENE, MEMPHIS
 HUBBERT, CHAS HUGHES, COLLIERVILLE
 HUOSUN, JOS STALM, MEMPHIS
 HUOSUN, SUE BETH, MEMPHIS
 HUFF, CARK WAYNE, MEMPHIS
 HUFFMAN, JOHN DAVID, MEMPHIS
 * HUGHES JK, FELIX A, MEMPHIS
 HUGHES, ALLEN HOLT, MEMPHIS
 * HUGHES, JAMES GILLIAM, MEMPHIS
 * HUGHES, JOHN DAVIS, MEMPHIS
 * HUGHES, MAX, MEMPHIS
 HUGHES, ROBT RULE, MEMPHIS
 HUMMEL, JOHN VERNON, MEMPHIS
 HUMPHREY, STEPHEN PAUL, MEMPHIS
 HUNT, JAMES CALVIN, MEMPHIS
 HUNTER, SAML E, MEMPHIS
 HUTCHINS, CHAS EDWARD, MEMPHIS
 HUTCHINS, LINDA FAYE L, MEMPHIS
 HYDE III, SAML ELISHA, MEMPHIS
 IGNACZAK, THOMAS F, MEMPHIS
 IJAMS, JOE HAKTLEY, MEMPHIS
 ILABACA, PATRICIA A, MEMPHIS
 * INGLE, CHAS WM, MEMPHIS
 INGRAM, ALVIN JOHN, MEMPHIS
 INMAN, PATRICIA SUE, MEMPHIS
 IKWIN, ROBERT BRYSON, MEMPHIS
 JABBOUR, C EUGENE, MEMPHIS
 JACKSON, THUS M, MEMPHIS
 JACOBS, ARTHUR ELLIOTT, MEMPHIS
 JALLEPALLI, PANDURANGA, MEMPHIS
 JAMES, HAL PEAKSON, MEMPHIS
 * JAMES, JESSE ARVIN, MEMPHIS
 JAKRED, LOUIS KATHERINE, MEMPHIS
 JAKRETT JK, CHAS LESLIE, MEMPHIS
 JAUCHLER, GEKARD A, MEMPHIS
 JEFFERS, OLIVER C, MEMPHIS
 JENKINS, GEORGE A, MEMPHIS
 JENKINS, JUN CALVIN, MEMPHIS
 JENKINS, GERALD RAY, MEMPHIS
 JOHNSON, JAMES O, MEMPHIS
 JOHNSON, JAMES GIBB, MEMPHIS
 JOHNSON, LARRY HULLIDAY, MEMPHIS
 JONES JR, QUITMAN W, MEMPHIS
 JONES JK, SIUNEY U, MEMPHIS
 * JONES, ALBERT MITCHELL, MEMPHIS
 JONES, JOE PAUL, MEMPHIS
 JONES, K LUBY, MEMPHIS
 JONES, ROBT KILEY, MEMPHIS
 * JULICH, ARTHUR WILSON, MEMPHIS
 JUSTIS, E JEFF, MEMPHIS
 KAPLAN, EDWARD STEVEN, MEMPHIS
 KAPLAN, JERRY, MEMPHIS
 KAPLAN, KUBT JUEL, MEMPHIS
 KAPLAN, STANLEY BAKUCH, MEMPHIS
 KARKER, MONANDAS S, MEMPHIS
 KASSELS WAHID, LAILA, MEMPHIS
 KASSELBERG, LYMAN A, MEMPHIS
 KATZ, GILBERT MAKVIN, MEMPHIS
 KELLETT, GARY LEON, MEMPHIS
 KELLEY, BOBBY JERALD, MEMPHIS
 * KELLY, ERNEST GEU, MEMPHIS
 KELLY, RICHARD T, MEMPHIS
 KENDRICK, K MARK, MEMPHIS
 KERLAN, KUBT ASHLEY, MEMPHIS
 KESSLER, HENRY G, MEMPHIS
 KHANDEKAK, ALIM, MEMPHIS
 KHANDEKAK, SUPHIA HAQUE, MEMPHIS
 KIEFEK, PATSY K, MEMPHIS
 KILEOJIAN, VAKTES, MEMPHIS
 KIMBALL, NUAH BKAVEN, MEMPHIS
 KING JK, WILLIAM SCOTT, MEMPHIS
 KING, BILLY A, MILLINGTON
 * KING, CHAS MACK, MEMPHIS
 * KING, JOHN C, MEMPHIS
 KINGTON, JOHN MICHAEL, MEMPHIS
 KIRKLEY, JOHN BEAUCHAMP, MEMPHIS
 KIRKPATRICK, KUBT DEAN, MEMPHIS
 KISABETH, KUBERT M, MEMPHIS
 KITACHOI, ABUS EUBAL, MEMPHIS
 KLEIER JK, ERNEST BOBBY, MEMPHIS
 KLINE, KUBT PAUL, MEMPHIS
 * KLUTZ, WM F, MEMPHIS
 KNUTT, DAVID HUNARD, MEMPHIS
 KNUX, ROBT L, MEMPHIS
 KOLEYNI, ASGHAR, MEMPHIS
 KUNIGSBERG JK, CHARLES, MEMPHIS
 KUONCE, MAKSHALL LYNN, MEMPHIS
 * KUKUNES, SHELUON BEKNARK, MEMPHIS
 * KUSSMANN, CHAS E, MEMPHIS
 KRAUS, ALFRED PAUL, MEMPHIS
 KRAUS, MELVIN M, MEMPHIS
 KRISLE JK, JOE RICHARD, MEMPHIS
 KROETZ, FRANK WM, MEMPHIS
 KRONENBERG, JOEL I, MEMPHIS
 KULP, ROY, MEMPHIS

KUTKENDALL JR, NATHANIEL, MEMPHIS
KUTKENUALL, CARY M, MEMPHIS
KYLE, JDS WAKREN, MEMPHIS
LAMAK JR, LUCIUS M, MEMPHIS
* LANDIS, HARRY ZAHM, MEMPHIS
LANDSEE, CARL GEO, MILLINGTON
LANGFORD JR, C THOMAS, MEMPHIS
LANGSTON, JAMES WILSON, MEMPHIS
LANKFORD, WM ALAANDEK, MEMPHIS
LARIMER, PERKY JAMES, MEMPHIS
LARKIN, CHARLES NEWTON, GERMANTOWN
LASTEK JR, KUBT EUGENE, MEMPHIS
* LATHAM, FRANK A, MEMPHIS
LATHRAM JR, MARVIN M, MEMPHIS
LATOUK, UANA L, MEMPHIS
LAUGHLIN JR, ALBERT E, MEMPHIS
LAUGHLIN SR, ALBERT E, MEMPHIS
LAVELLE JR, HERMAN G, MEMPHIS
LAWRENCE, JESSE ALVAH, MEMPHIS
LAWSON, KUBT EDWARD, MEMPHIS
LAWSON, KUNALU D, MEMPHIS
LAZAR, EDWARD HARRY, MEMPHIS
LEBDVITZ, M A, MEMPHIS
LEE, LING HONG, MEMPHIS
* LEFKOVITS, AAKDN M, MEMPHIS
LEMMI, HELIO, MEMPHIS
LEUNG, RICHARD KIN FOOK, MEMPHIS
LEVENSAN, DAVID E, MEMPHIS
LEVINSAN, MICHAEL JAY, MEMPHIS
LEVITCH, MELVYN ABRAHAM, MEMPHIS
LEVV, JOE S, MEMPHIS
LEWIS JR, LAWRENCE C, MEMPHIS
LEWIS, MYKON, MEMPHIS
* LEWIS, PHILIP M, MEMPHIS
LIEBERMAN, PHILLIP LOUIS, MEMPHIS
LINDER, HILARY FRANCIS, MEMPHIS
LINDERMUTH, JOHN K, MEMPHIS
LING, FRANK M, MEMPHIS
LIPSCOMB, ALYS H, MEMPHIS
LIPSEY, GEO GARTLEY, MEMPHIS
LIPSHITZ, JEFFREY, MEMPHIS
LITCH JR, MELVIN, MEMPHIS
LITTLE JR, WM KUBT, MEMPHIS
LIVERMORE JR, GEO R, MEMPHIS
* LOCKWOOD JR, DUDLEY G, MEMPHIS
* LONG, CHAS EDWARD, MEMPHIS
LONG, THOMAS E, MEMPHIS
LONG, WM E, MEMPHIS
LONGHEED, JOS C, MEMPHIS
LUVE, VARNA MAE PEYTON, ARLINGTON
LOVEJOY, GEO S, MEMPHIS
LOVING, MARTHA A, MEMPHIS
LUTHER, KUBT WAYNE, MEMPHIS
LYNCH, MICHAEL HARRY, MEMPHIS
MABRY JR, EDWARD HAYS, MEMPHIS
MABRY, EDWARD HAYS, MEMPHIS
MACEY, WM FREDERICK, MEMPHIS
MAODOUX, HULT BENJ, MEMPHIS
MADLOCK, LAWRENCE E, MEMPHIS
MADUSKA, ALBERT LOWELL, MEMPHIS
MAGEE, MICHAEL JOS, NEW YORK, NY
MAGILL, HUBERT LYNN, MEMPHIS
* MAGUDA, THOS ANDREW, VENICE, FL
MAGUIRE, JAMES K, MEMPHIS
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MANDELL, ALAN I, MEMPHIS
MANKIN, JOHN C, MEMPHIS
MANN, JAMES ALAN, MEMPHIS
MANUGIAN, ARSEN, MEMPHIS
MARCY JR, WILLIAM L, MEMPHIS
MARIENCHECK, WM IKVIN, MEMPHIS
MARIN GARCIA, JOSE, MEMPHIS
MARKER, HOWARD WM, MEMPHIS
* MARKLE, PHILIP METRIC, MEMPHIS
MARSHALL, MICHAEL RALPH, MEMPHIS
* MARTEN, GEO M, MEMPHIS
MARTIN, DANIEL C, MEMPHIS
MARTIN, DOROTHY JEANNETTE, MEMPHIS
MARTIN, ROY WAYNE, MEMPHIS
MASON, WM M, MEMPHIS
MATHES, GORDON LAWRENCE, MEMPHIS
MATTHIS, ERNEST H, MEMPHIS
MATTHEWS, OLIVER S, MEMPHIS
MAURY JR, WM P, MEMPHIS
MAYER, RAYMOND FRANKLIN, MEMPHIS
MAYFIELD, LEROY H, MEMPHIS
MAYHEW, JAMES L, MEMPHIS
MAYS, KIT SANFORD, MEMPHIS
MC AFEE, JAMES EARL, MEMPHIS
MC BURNEY, ROBT PDWEKS, MEMPHIS
* MC CALL, JOHN WM, MEMPHIS
MC CARTER JR, JOHN G, MEMPHIS
MC CAUGHAN JR, JOHN JOE, MEMPHIS
MC CLOY, RANDOLPH M, MEMPHIS
MC CLURE, JAMES G, MEMPHIS
MC CORMACK, HAROLD ARTHUR, MEMPHIS
MC COWN, LOUIS K, MEMPHIS
MC CUBBIN, JACK H, MEMPHIS
MC DANIEL JR, ELMER F, MEMPHIS
MC EWAN JR, KUBT C, MEMPHIS
MC GEE, JOHN LAWRENCE, MEMPHIS
MC GREW III, FRANK A, MEMPHIS
MC KENZIE, EUGENE EATON, MEMPHIS
* MC KINNEY, JAMES A, MEMPHIS
MC LARTY, ALEXANDER M, MEMPHIS
MC LARTY, BARNEY ESTES, MEMPHIS
MC LEMORE JR, THOS E, MEMPHIS
* MCCOOL, U C, MEMPHIS

MCCONALD, MARTHA M, MEMPHIS
MERIWETHER III, THOS M, MEMPHIS
METHENY, RALPH S, SOUTHAVEN, MS
METZGER, WM EUGAK, MEMPHIS
MEYER JR, ALPHONSE H, MEMPHIS
MEYER, DAVID, MEMPHIS
MICHELSON, MARIE L, MEMPHIS
MILES, KUBT MILLARD, MEMPHIS
MILFORD JR, LEE WATSON, MEMPHIS
MILLER JR, GEO L, MEMPHIS
MILLER, FOUNTAIN FOX, MEMPHIS
* MILLER, HAROLD RAY, MEMPHIS
MILLER, JOE HARRY, MEMPHIS
MILLER, JOSEPH BAYARD, MEMPHIS
MILLER, RICHARD ALVAH, MEMPHIS
MILLER, RICHARD B, MEMPHIS
MILLER, RICHARD D, MEMPHIS
* MILLER, RICHARD WALLACE, MEMPHIS
MILLER, THOS IVA, MEMPHIS
MILLS, GEO T, MEMPHIS
MILNOR JR, J PERVIS, MEMPHIS
MINKIN, IRVING C, MEMPHIS
MIRVIS, DAVID MACK, MEMPHIS
MITCHUM, WM RUBSON, MEMPHIS
MUELLER JR, BENJ A, EADS
MUFFATT III, WILLIAM LEE, MEMPHIS
MUFFATT JR, WM LEE, MEMPHIS
MUGAN, EDWARD NENON, MEMPHIS
MUINUDDIN, MUHAMMED, MEMPHIS
MUINUDDIN, SHAMIM, MEMPHIS
MOLINSKI, EDWARD M, MEMPHIS
MUNAGHAN, THOMAS M, MEMPHIS
MUNGER JR, KALPH HORACE, MEMPHIS
MOORE JR, FOUNTAINE B, MEMPHIS
* MOORE JR, MOORE, MEMPHIS
MOORE, DAVID F, MEMPHIS
MOORE, JAMES A, MEMPHIS
MOORE, MARION ROBERTSON, MEMPHIS
MORENO, FRANCISCO G, MEMPHIS
MORRIS, JOHN THOS, MEMPHIS
MORRIS, WM RANDOLPH, MEMPHIS
MORRISON, LARRY BURT, MEMPHIS
MORRISON, WINSOR VERDUN, JACKSON, MS
MORSE, WM HAL, MEMPHIS
MOSHIER, WM HILL, MEMPHIS
* MOSKOWITZ, HENRY, DANVILLE, VA
MOSS, JOHN PALMER, MEMPHIS
* MOSS, THOS CHESTER, MEMPHIS
MOSS, WM BENJ, MEMPHIS
MUTLEY, THOMAS EARL, MEMPHIS
MOUSTAFA, SALWA, MEMPHIS
MROZ, CHRISTINE T, MEMPHIS
MUIRHEAD, ERNEST ERIC, MEMPHIS
MURDOCK, WAUE THOS, MEMPHIS
* MURPHEY, FRANCIS, NAPLES, FL
MURPHY, CYNTHIA DABNEY, MEMPHIS
MURPHY, JAMES GARNETT, MEMPHIS
MURPHY, PATRICK J, MEMPHIS
MURPHY, WALTER HENRY, MEMPHIS
MURPHY, WM MONT, MEMPHIS
MURRAY JR, WM FITZHUGH, MEMPHIS
MURRAY, IAN FARRELL, MEMPHIS
MYERS, WM STANLEY, MEMPHIS
NADEL, ALAN MARC, MEMPHIS
NASH, JOHN PAUL, MEMPHIS
NAWAF, KAYS, MEMPHIS
NEAL, WILMER LEWIS, MEMPHIS
NEELY JR, CHAS LEA, MEMPHIS
NEWMAN, LARRY BENARD, MEMPHIS
NICHOLS, THOS WAUDELL, MEMPHIS
NICHOPDULUS, GEORGE C, MEMPHIS
NICKSON, JAMES JOS, MEMPHIS
NIELL, HAKVEY BARKETT, MEMPHIS
NIKOLOVSKI, OLIVER T, MEMPHIS
NOBLES JR, EUGENE KOUMAN, MEMPHIS
NOE, HORACE NORMAN, MEMPHIS
* NORMAN, KUBT SIDNEY, GERMANTOWN
NORTH, WM C, MEMPHIS
NORTHERN JR, WM L, MEMPHIS
NOVICK, MARK D, MEMPHIS
O'CONNELL, JOHN F, MEMPHIS
O'SULLIVAN, PATRICK JOS, MEMPHIS
* OELKER, DONALD WILSON, MEMPHIS
UGLE, EVELYN M BASSI, MEMPHIS
* UGLE, WM SANDERS, MEMPHIS
UGLESBY, CLAUDE UUNN, MEMPHIS
UKRAH, AMUS, MEMPHIS
* ULIM, CHAS BUKTON, MEMPHIS
* OLMAN, JDS COOKE, MEMPHIS
USKPET JR, P E, MEMPHIS
USBDON, FRANK JACKSON, MEMPHIS
USWALD, WM J, MEMPHIS
OUTLAN, JOHN EDWARD, COLLIERSVILLE
OUTLAN, WILLIAM F, COLLIERSVILLE
OWENS, JAMES HARVEY, MEMPHIS
* PACKER, HENRY, MEMPHIS
PAGE, ALFRED HACH, MEMPHIS
PAGE, GENE RUFFNER, MEMPHIS
PAGE, ROY CALVIN, MEMPHIS
PAGIDIPATI, DEVAIAH, MEMPHIS
PAINTER, MAX WESLEY, MEMPHIS
PALMER IV, ROBERT E, MEMPHIS
PALMIERI, GENARD MIGUEL A, MEMPHIS
PARKER, JOS, MEMPHIS
PARKUTT JR, CHAS WM, MEMPHIS
* PARSONS III, WAKO CHESTER, MILLINGTON
* PASTER, SAML, SANTAMONICH, CA
PASTERNAK, MORRIS, MEMPHIS

PATE, JAMES M, MEMPHIS
PATEL, MUHANLAL L, MEMPHIS
PATTERSON III, RUSSELL H, MEMPHIS
PATTERSON JR, RUSSELL H, MEMPHIS
PATTERSON, KELLY, MEMPHIS
PATTERSON, RUSHTON EUGENE, MEMPHIS
PATTERSON, SAM POLK, MEMPHIS
PATTERSON, STANLEY MARTIN, MEMPHIS
PAUL, KAPHAEL NATHAN, MEMPHIS
PEACE, ROBERT JOS, MEMPHIS
PEARSAN, RICHARD MCQUISTON, MEMPHIS
PEOIGU, PHILLIP AULEK, MEMPHIS
PEEPLES JR, JOHN D, MEMPHIS
PENDER JR, JOHN VINCENT, MEMPHIS
PERRY, EDGAR EMKICH, MEMPHIS
PETERS, THOMAS GUY, MEMPHIS
PETTIT JR, PAUL NESMITH, MEMPHIS
PHELPS, WM CHAS, MEMPHIS
PHILLIPS, JERRY CLYDE, MEMPHIS
* PHILLIPS, WM EARL, MEMPHIS
PHOTOPULOS, GUY J, MEMPHIS
PIAN JR, MAURICE C, MEMPHIS
PIGOTT, JOHN D, MEMPHIS
PINALS, ROBERT S, MEMPHIS
PINSON, E LOUISE, MEMPHIS
PINSTEIN, MARTIN LEE, MEMPHIS
PITCOCK, JAMES ALLISON, MEMPHIS
PLATKIN, ALAN BAILEY, MEMPHIS
PLITMAN, GERALD IKA, MEMPHIS
* POOL, ROBT MC CAUGHRIN, MEMPHIS
PURTER, COLUMBUS HASSELL, MEMPHIS
PURTER, HUEY HENDERSON, MEMPHIS
PUNKER, WM RICHARD, MEMPHIS
POUSEY, MICHAEL EVANS, MEMPHIS
POWELL, CARROLL E, COLLIERSVILLE
PRICE, CAROLYN CULPEPPER, MEMPHIS
PRICE, JAMES HOWARD, MEMPHIS
PRIDGEN, STEPHEN ALLEN, MEMPHIS
PRIDGEN, WM RUBY, MEMPHIS
PRIETO JR, LOUIS CARLOS, MEMPHIS
PROCTOR, RUSSELL JAY, MEMPHIS
PUTMAN, BILLIE HAROLD, MEMPHIS
QUINN III, PETER JOS, MEMPHIS
KAGHAVAIAH, N V, MEMPHIS
KAGSUALE, TOMMY MAC, MEMPHIS
KAHMAN, MAHFUZUK, MEMPHIS
RAINEK, J KENYON, MEMPHIS
RAINES, RICHARD BRODAX, MEMPHIS
* RAINES, SAM LUCAS, MEMPHIS
* RAINEY, WM THOS, MEMPHIS
RAMANATHAN, JAYA, MEMPHIS
RAMANATHAN, KODANGUDI B, MEMPHIS
RAMEY III, DANL RANDOLPH, MEMPHIS
RAMONET, JORGE LINA, LAKEOD, TX
RANDOLPH, JERRY F, MEMPHIS
RANDOLPH, PAUL DOUGLAS, MEMPHIS
KAD, BHASKAR NARAYAN, GERMANTOWN
KAD, PAIDIPALLI B, MEMPHIS
KANTANI, PALLAVI V, MEMPHIS
KAY, MORRIS WILLIAM, MEMPHIS
KEAVES, EDWARD MC CORMICK, MEMPHIS
* REDMON, JOHN JONES, MEMPHIS
KEED, CHESTON MURRAY, MEMPHIS
KEED, EDWARD WILSON, MEMPHIS
KEED, MARK LUYO, MEMPHIS
KEEDEK, KUBT CANADA, MEMPHIS
KEESE JR, HAKVEY C, MEMPHIS
KEESE, HALDEN EUGENE, MEMPHIS
KEISSER JR, JOHN MILTON, MEMPHIS
KENTROP, WALTER ANTON, MEMPHIS
KENTROP, WM EMIL, MEMPHIS
KHEA JR, HAL S, MEMPHIS
* KHEA JR, HAL SALE, MEMPHIS
KHODES JR, CHAS THOS, MEMPHIS
RICHARDSON JR, KUBT LEE, MEMPHIS
RICHARDSON, ELBERT GREER, MEMPHIS
RICHARDSON, TUMMIE MACK, MEMPHIS
RIGGS JR, WM WEBSTER, MEMPHIS
RIGGS, CHAS M, MEMPHIS
RILEY, FRANCES OSBORN, MEMPHIS
ROANE, JOURDAN ARCHIBALD, MEMPHIS
ROBBINS JR, SAMUEL GWIN, MEMPHIS
ROBBINS, SAML G, MEMPHIS
* ROBERTS, FRANK L, MEMPHIS
ROBERTSON, JAMES THOS, MEMPHIS
ROBERTSON, JOHN HUBSON, MEMPHIS
ROBINSON JR, CHAS G, MEMPHIS
ROBINSON, JR, JOHN EDWARD, MEMPHIS
ROBINSON, JAMES A, MEMPHIS
ROBINSON JR, LOWELL BENJ, MEMPHIS
KUBSETT, JOHN FREDERICK, MEMPHIS
* ROGERK, GORDON K, MEMPHIS
ROJAS, NORBERTO, MEMPHIS
RONEY, RONALD STEVEN, MEMPHIS
ROSEN, GERALD MICHAEL, MEMPHIS
ROSENBERG, ELIAS WM, MEMPHIS
ROSENBERG, ZACHARY, MEMPHIS
ROSENBERG, JACOB, MEMPHIS
RUTHSCHILD, JOSEPH A, MEMPHIS
RUCH JR, WALTER ALLWEIN, MEMPHIS
RUCH, ROBT MILTON, MEMPHIS
RODNER JR, HENRY GORDON, MEMPHIS
ROLEMAN, CHESTER ALLAN, MEMPHIS
KUNYAN JR, JOHN WM, MEMPHIS
RUSSELL JR, JOHN MURRAY, MEMPHIS
RUSSO, WM LOUIS, MEMPHIS
RUTSCHMAN, JULIAN LEANDER, MEMPHIS
RYAN JR, GEO MARION, MEMPHIS

SACKS, HAROLD SAMUEL, MEMPHIS
 SAELEY JR, CHAS FRANKLIN, MEMPHIS
 SAGE, FRED P, MEMPHIS
 SALAZAR, JUDGE E, MEMPHIS
 SALKY, NATHAN KALMUN, MEMPHIS
 SAMMUNS JR, LEHMAN CLARK, MEMPHIS
 SAMUELS, ALAN DANL, MEMPHIS
 * SANDERS, SAM HUUSTON, MEMPHIS
 SANFORD JR, JACK CARTER, MEMPHIS
 SANFORD, DAVID MARSHALL, MEMPHIS
 SATTERFILL JR, WM T, MEMPHIS
 SAUTER, ROBERT F, GERMANTOWN
 SCHAEFFER JR, SANUEFORD J, MEMPHIS
 SCHAEFFER, DONALD EARL, MEMPHIS
 SCHAEFFER, HARRY IVAN, MEMPHIS
 * SCHEINBERG, DAVID ERSHEL, MEMPHIS
 SCHETTLEK, BETTY J, MEMPHIS
 SCHETTLEK, WM HEYMURKE, MEMPHIS
 SCHLESINGER, VICTOR ADLER, MEMPHIS
 SCHOTTLE JR, G PHILLIP, MEMPHIS
 * SCHRIEVE, PHILLIP CHAS, MEMPHIS
 SCHROEDER, HARRIET L, MEMPHIS
 SCHURFF, JEROME, MEMPHIS
 SCHWARTZ, STANLEY SIMON, MEMPHIS
 SCOTT III, BENJ F, MEMPHIS
 SCOTT JR, DANIEL J, MEMPHIS
 * SCOTT, CLARENCE B, BULIVAR
 SCOTT, EDWIN LEE, MEMPHIS
 SCOTT, JUS MANSON, MEMPHIS
 SCOTT, RANDALL LEE, MEMPHIS
 SEALE, JAMES L, MEMPHIS
 SEBES, JENO IMKE, MEMPHIS
 SEGAL, ANTHONY, MEMPHIS
 SEGAL, JACK, MEMPHIS
 SEGAL, MAURICE P, MEMPHIS
 * SEGERSON, EDWARD C, MEMPHIS
 * SEMMES, R EUSTACE, MEMPHIS
 * SEXTON, RAY OWEN, MEMPHIS
 * SHAH, BHUPENDRA N, MEMPHIS
 SHAPIRO, NORMAN U, MEMPHIS
 SHAPPLEY JR, WM VANCE, MEMPHIS
 * SHAW SR, JOHN LYLE, MEMPHIS
 SHEA JR, JOHN JOS, MEMPHIS
 SHEA JR, MARTIN COYLE, MEMPHIS
 SHEARIN, ROBT P N, MEMPHIS
 SHEFFIELD, WM E, MEMPHIS
 SHELL III, DAN H, MEMPHIS
 * SHELTON, JAMES R, HEBER SPRINGS, AR
 SHERKUD II, ROME, MEMPHIS
 SHIFFMAN, STEPHEN MURRAY, MEMPHIS
 SHIPKEY JR, FREDRICK H, MEMPHIS
 SHIPPEL, RONALD M, GLENDALE, CA
 SHIVELY, JOHN ADRIAN, MEMPHIS
 SHUMAKE, LESLIE BOWLIN, MEMPHIS
 SIEGEL, JEROME SEYMOUR, MEMPHIS
 SIEGEL, SAUL, MEMPHIS
 SIEGLE, ROBT LOUIS, MEMPHIS
 SILVERMAN, MICHAEL N, MEMPHIS
 SIMMONS, JAMES C H, MEMPHIS
 SIMPKINS, SIUNEY M, MEMPHIS
 SIMPSON, JAMES W, HICKORY WITHE
 SIMS, CLIFFORD W, MEMPHIS
 SISK, THOS DAVID, MEMPHIS
 SISSMAN, PAUL R, MEMPHIS
 SKAGGS, MARVIN RICHARD, MEMPHIS
 * SKINNER, EDWARD FULLANO, MEMPHIS
 SLANSON JR, HENRY THOS, MEMPHIS
 SLUTSKY, AVKUN ABE, MEMPHIS
 * SMITH JR, HUGH MILBY A, MEMPHIS
 SMITH JR, VERNON L, MEMPHIS
 SMITH, CLOYE GAYLON, MEMPHIS
 SMITH, KIRBY LEE, MEMPHIS
 SMITH, STANLEY L, MEMPHIS
 SMITH, VINCENT O, MEMPHIS
 SMITH, W CHAPMAN, MEMPHIS
 * SMYTHE JR, FRANK WARD, MEMPHIS
 SNIODER, CHARLES VAN, MEMPHIS
 SNOYER, OWEN ERLIN, MEMPHIS
 SOHM, JOHN J, MEMPHIS
 SOLLEE JR, ARTHUR NEYLE, MEMPHIS
 SOLOMITO, VINCENT LEE, MEMPHIS
 SULOWAY, MARK STEPHEN, MEMPHIS
 SPALDING, ALANSON R, MEMPHIS
 SPIOTTA JR, EUGENE J, MEMPHIS
 SPIOTTA, EUGENE JOS, MEMPHIS
 SPIOTTA, LARRY B, MEMPHIS
 * SPRUNT, DOUGLAS H, MEMPHIS
 STANFORD, CARL COOPER, MEMPHIS
 STANFORD, JAMES FRANKLIN, MEMPHIS
 STANLEY JR, THOS V, MEMPHIS
 STARR, RAY GINGLES, MEMPHIS
 STARR, JASON LEONARD, MEMPHIS
 STEPP, WM PRICE, MEMPHIS
 STERN, THOS NEUTON, MEMPHIS
 STEVENSON, CLEO WILSON, MEMPHIS
 STEVENSON, EDWARD N, MEMPHIS
 STEVENSON, RUBIN MALCOLM, MEMPHIS
 * STEWART, MARCUS JEFFERSON, MEMPHIS
 STEWART, SHERKILL BRUCE, MEMPHIS
 STOLLERMAN, GENE H, MEMPHIS
 * STRAIN, SAML FREDERICK, MEMPHIS
 STRASBERG, GARY DAVID, MEMPHIS
 STRATTON, HENRY THOS, MEMPHIS
 * STREETER, ALBERT NOLAN, MEMPHIS
 STUBBLEFIELD, ROBT J, MEMPHIS
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 FELDMAN, RICHARD MARKEN, NASHVILLE
 FELTS, PHILIP W, NASHVILLE
 FELTS, STEPHEN HARRY, DONELSON

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 * FIDELHULTZ, JACOB NORMAN, NASHVILLE
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 FIELDS, JOHN PERSHING, NASHVILLE
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 * FINKS, ROBT MARK, NASHVILLE
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 FRANCIS, RUPERT ASHTON, NASHVILLE
 FRANKLIN, JOHN DAVID, NASHVILLE
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 * FROELICH, E EDWIN, NASHVILLE
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 KYGEM, KENT, NASHVILLE
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 LA VOI, SAML JOS, NASHVILLE
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 * LAMB, ROLAND O, NASHVILLE
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 LAWRENCE JR, GRANYVILLE A, NASHVILLE
 LAWSON, ALBERT ROBT, HUFREESBORO
 LE QUIRE, VIRGIL S, NASHVILLE
 LEE, DAVID GRANYVILLE, NASHVILLE
 LENTZ, JOS FRANCIS, NASHVILLE
 LEONAKO, JOHN MARTIN, NASHVILLE
 LESTER, JAMES PEYTON, NASHVILLE
 LEWIS, MALCOLM R, NASHVILLE
 LEWIS, NOKRIS S, NASHVILLE
 LIODLE, GRANT WINDER, NASHVILLE
 LIMBKO, THOMAS J, NASHVILLE
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 * LINN, MARGARET RUTH, NASHVILLE
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 LISSELL, RICHARD SCOTT, NASHVILLE
 LUDEN, JAMES POPE, NASHVILLE
 LOGAN, JIMMI H, NASHVILLE
 LOGAN, THUS PERCIVAL, NASHVILLE
 LONG, WM ROYSTON, NASHVILLE
 LOOS, WILLIAM CARL, NASHVILLE
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 * LOWE, JACKSON PHILIP, NASHVILLE
 LUBOW, LAWRENCE O, NASHVILLE
 * LYLE, PHILIP LEWIS, NASHVILLE
 LYNCH, JOHN BROWN, NASHVILLE
 MAC MILLAN JR, CHAS W, NASHVILLE
 MACMILLAN, ROBT DUNCAN, NASHVILLE
 MAOON JR, JAMES JOS, NASHVILLE
 MAGPANTAY, EDMUND O, MT JULIET
 * MAGRUDER, ROBT HERMAN, OLD HICKORY
 MALLARD, ROBT ELWOOD, NASHVILLE
 MANALAC SR, ABELAKOO Z, MT JULIET
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 MASSIE, KALPH W, NASHVILLE
 * MATZELLE, JULIUS JOHN, NASHVILLE
 * MAYER, JAMES A, NASHVILLE
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 MAYES, CHAS EUGENE, NASHVILLE
 MAYNARD, O JERRY, NASHVILLE
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 MC CRACKEN, ROBT LAZAR, NASHVILLE
 MC GEEHE, JAMES BARTLEY, NASHVILLE
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 MC GRIFF JR, JAMES E, NASHVILLE
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 MC KEL, EMERY ARNOLD, NASHVILLE
 MC KINNEY, THURMAN DWIGHT, NASHVILLE
 MC LEOD, ALEXANDER C, NASHVILLE
 MC MAHAN, JOHN WELLINGTON, NASHVILLE
 MC MURRAY, M LHAS, NASHVILLE
 MC PHERSON, EWING WM, NASHVILLE
 MC PHERSON, WARREN F, NASHVILLE
 MC QUIRTER JR, WUTEN, NASHVILLE
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MCKEE, DAVID EARL, MADISON
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 MEACHAM, WM FELLANO, NASHVILLE
 MEIKUNSKY, AKNULO MAX, NASHVILLE
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 METTS III, VEGIL L., NASHVILLE
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 MILLER, JOHN M., NASHVILLE
 * MILLER, LLOYD C., NASHVILLE
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 MILLER, MICHAEL PETER, NASHVILLE
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 MINCH, F MICHAEL, DUNELSON
 MINTUN, LEE RUY, NASHVILLE
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 MISHRA, GITA, NASHVILLE
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 MITCHELL, DUOGLAS PAKK, NASHVILLE
 MITCHELL, EDWIN HARRIS, NASHVILLE
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